The Commonwealth of Massachusetts

NEW BEDFORD TEXTILE SCHOOL

CATALOGUE

1930 1931

NEW BEDFORD, MASSACHUSETTS
1171-1219 PURCHASE STREET

Machinery Building

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Term expires June 30, 1931

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Term expires June 30, 1932

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ADMINISTRATION AND INSTRUCTION

ADMINISTRATION

Abbott P. Smith, *President.*
William Smith, *Principal.*
Maud L. Clark, *Senior Bookkeeper.*
Ellen Broadmeadow, *Senior Clerk and Stenographer.*
Berniece Weeks, *Junior Clerk.*

INSTRUCTION

Heads of Departments

Frank Holden, *Carding and Spinning.*
William Acomb, *Warp Preparation and Weaving.*
Samuel Holt, *Weaving and Designing.*
Lewis G. Manning, *Knitting.*
Fred E. Busby, S.B., *Chemistry, Dyeing and Finishing.*
Morris H. Crompton, *Engineering and Mechanical Drafting.*

Instructors

Fred Beardsworth, Stephen R. Moore, *Designing and Weaving.*
William T. Walton, *Mechanical Department.*
Adam Bayreuther, *Machine Shop Practice.*
Thomas H. Gourley, *Carding and Spinning.*
Henry H. Broadfoot, B.S., Abram Brooks, Frank L. D. Weymouth, A.B., *Chemistry, Dyeing and Finishing.*
Charles O. Redfield, *Engineer.*
John P. Rooney, Clarence J. Smith, *Steam Firemen.*
Joseph R. N. Cliff, George Wood, Sidney McMullen, *Janitors.*

The principal and heads of departments constitute the faculty of the school. The day instructors serve both day and evening.

Assistant Evening Instructors

Carding and Spinning

Herbert Higgins — James Nisbet, Jr.

Warp Preparation and Weaving

Manuel Alves
John W. Anderton
Fred Birtwistle
John W. Bury
Frank Cooper
Omer Dumas
William Fitton
Frederick Garlington
Stephen Hebden
Alfred J. Mainville
Joseph E. Pageotte
John Ramos
Albert N. Rushworth
William Sharples
Rhodes Smith
Joseph Wilkinson
Edward Wunschel

Warp Drawing

Hilda M. Kenworthy — Isabel C. Murphy

Designing

Jean C. Uberti

Mechanical Drawing

Bertrand E. Davies — James E. Foster
Henry C. Nelson

Electrical Engineering

William T. Bailey

Steam Engineering

Charles O. Redfield

Machine Shop Practice

Louis Culver — Earle P. Bowen
Simeon B. Livesley — Byron M. Pardee

SCHOOL CALENDAR

1930

Friday, September 5, 9 A.M. Second entrance examination.
Monday, September 8, 8.30 A.M. Beginning of first semester, day classes.
Thursday, September 25, and Friday, September 26. Enrollment, evening students, 7.30 to 9 P.M.
Monday, September 29, 7.30 P.M. Beginning of first term, evening classes.
Monday, October 6, to Friday, October 10, inclusive. Class elections.
Wednesday, November 26, 12 M., to Monday, December 1. Thanksgiving recess.
Monday, December 15, to Friday, December 19, inclusive. Examinations, evening classes.

Friday, December 19. Close of first term, evening classes.
Friday, December 19, to Monday, January 5. Christmas recess.

1931

Friday, January 2, 7.30 P.M. Enrollment, second term, evening classes.
Monday, January 5, 7.30 P.M. Beginning of second term, evening classes.
Tuesday, January 27, to Friday, January 30, inclusive. Mid-year examinations, day classes.
Monday, February 2, 8.30 A.M. Beginning of second semester, day classes.
Monday, March 23, to Friday, March 27, inclusive. Examinations, evening classes.
Friday, March 27. Close of second term, evening classes.
Monday, March 30, to Friday, April 3, inclusive. Spring recess.
Tuesday, June 2, to Monday, June 8, inclusive. Final examinations, senior class.
Monday, June 8, to Friday, June 12, inclusive. Final examinations, other classes.
Wednesday, June 10, 9 A.M. Entrance examinations.
Friday, June 12, 8 P.M. Graduating exercises, school hall.

NEW BEDFORD TEXTILE SCHOOL

THE SCHOOL AND ITS PURPOSES

The Legislature of the Commonwealth of Massachusetts, in the act under which the Trustees of the New Bedford Textile School were incorporated, gives as the purpose of the incorporation that of establishing and maintaining a textile school for instruction in the theory and practical art of textiles and kindred branches of industry.

As New Bedford is primarily a cotton manufacturing city, this school confines itself principally to instruction in the cotton branch of the textile industry, and seeks to perfect itself in this line. Its course of instruction is arranged to subserve the interests of two general classes of students: (1) day students,—those who give their whole time for two or three years to acquiring the theory as well as the practice of cotton manufacturing in all its details, from the raw cotton to the finished fabric, and also have instruction in the scientific principles which underlie the construction of the machinery and its operation, and the artistic principles which are involved in the production of desirable and ornamental fabrics; (2) evening students,—those who are employed in the mills during the day and who, by attending the Textile School evenings, are able to learn other phases of the industry from that in which they are employed, or to perfect themselves in their special lines of work, and become more efficient workmen. The courses of instruction for these two classes of students are given fully on other pages of this catalogue.

The whole of the machinery in the school is absolutely modern, being constructed especially for the school. It is all high grade, has latest improvements, and is especially built to afford facilities for all kinds of experimental work, and represents all the leading types of machines from the best builders in the United States, and several English builders.

There is no mill in which there is so large a variety of machinery as in the New Bedford Textile School. This consequently affords the student a better opportunity to become acquainted with various machines and methods than could be found in any one manufacturing establishment.

Each instructor in the day school is a man who is thoroughly conversant with the work of the department under his charge by thorough training and long experience. Each one has charge of the work in his department at night also, assisted by experienced assistants from the mills, many of whom are graduates of this school.

The school went into operation in the fall of 1899, and the first class was graduated in 1900. The regular courses were one year in length for the first few years, but were afterwards increased to three years. Special shorter courses are given, however, for which certificates are granted.

For nineteen years the school was a semi-private institution, but supported by appropriations made each year by the State and by the city of New Bedford. It

was managed by a Board of Trustees, two appointed by the Governor of the Commonwealth, two representing the city (the mayor and the superintendent of schools; ex officiis), and twenty organized under the general statute by which the school was founded, a perpetual body, with power to fill vacancies other than the four created for and representing the Commonwealth and city.

On July 1, 1918, it became a State institution by an act amending the State Constitution. It is still maintained with appropriations made by the State and City.

It is managed by a Board of Trustees consisting of eighteen members, the Commissioner of Education, ex officio, fifteen appointed by the Governor of the Commonwealth, and two, the Mayor and the Superintendent of Schools, ex officiis, representing the city. Most of the trustees are men who either are or have been connected actively with the manufacture of cotton textiles.

The number of individual students attending the school since its opening is 12,191, the number graduated 3,613. Many evening students who attend regularly do not take the examinations, and therefore do not appear as graduates, though they may have a good record as students, especially in practice. This shrinking from examinations is natural, for many of them have little or no command of English, or are not accustomed to examinations.

A large number of those who do not appear as graduates, however, are benefited by the instruction given in the school, and have acquired a knowledge and skill that have enabled them to rise in the industry and improve their financial and social condition.

THE LOCATION OF THE SCHOOL

The school is situated in the center of the city of New Bedford, Mass., on the main car line of the city, which connects with the mill districts, and is readily accessible to mill operatives who attend the evening sessions of the school. It is near the residential part of the city, and is therefore conveniently situated for non-resident pupils who take up a temporary residence in the city.

New Bedford is an especially suitable location for an institution of this character. It is the largest cotton manufacturing city of fine yarns and fancy woven fabrics and novelties in the country. Its spindles number 2,746,562, and looms, 57,676; and employees, 30,079.

High grade combed yarns are produced in New Bedford to a greater extent than in any other city, while the mills are engaged in the manufacture of fine shirtings, muslins, lawns, sateens, lenos, checks, piques, marquisettes and other fancy fabrics to an extent unknown elsewhere. New Bedford's great advantage in this respect can be attributed principally to the fact that her mills are nearly all of recent construction, with the most improved and up-to-date equipment. The environment of these mills is in itself a benefit to the students who select the New Bedford Textile School as the institution in which to learn the mill business, as they have opportunity to observe their construction and operation, and to find employment in them during the long summer vacations and upon finishing their course in the school.

New Bedford is within short distance of Hopedale, Whitinsville, Hyde Park, Providence, Pawtucket, Woonsocket, Taunton and other large cotton machinery centers. It is one of the healthiest of the manufacturing cities in the United States. Picturesquely situated on the extreme south shore of Massachusetts, it enjoys one of the mildest winter climates in New England, and thus offers peculiar residential advantages for non-resident students.

THE BUILDINGS

The school is housed in two separate buildings connected by a tunnel in the basement and by covered bridges overhead. They are constructed of red brick with trimmings of Indiana sandstone. They are classified as the machinery building and the recitation building.

The first now comprises the original building, erected in 1898–99, and the first two additions erected in the years 1901–02 and 1905, respectively, and the latest addition 1922 and 1923. This building is 164 feet in length, with an average depth of 112 feet. It is three stories high, with basement under most of it, and contains a floor space of 59,600 square feet. In it are situated the administration offices,

the power house and all the departments comprised in a cotton yarn and cotton cloth mill. In addition, it has two large thoroughly equipped rooms for instruction in the art of knitting, both for hosiery and underwear, and a gymnasium.

The recitation building was completed and occupied in the fall of 1911. It consists of a main building 108 by 93 feet 6 inches, three stories high, with a deep well-lighted basement under the whole of it, and contains 40,392 square feet of floor space. It also has an annex 68 feet 3 inches long by 19 feet 3 inches deep, one story high, with basement, and contains 2,634 square feet of floor space. This annex is used as an experimental laboratory and as a storeroom for chemical supplies.

The main building, besides being equipped with recitation and lecture rooms of various sizes, has a thoroughly equipped chemical laboratory, dyeing and finishing rooms, engineering laboratories, a commodious machine shop, drafting rooms, a designing room especially fitted, an exhibition room, and an assembly hall that will seat 400 persons.

Both structures are of the slow-burning mill construction type, approved by the leading fire insurance associations and mill engineers, while the general equipment of the plant is also illustrative of the best methods of lighting, heating, ventilating, humidifying and fire-protecting mills. Great attention has been paid to the planning and arranging of these buildings for the school, to make them suitable for the purposes of imparting textile instruction, and in order that the machinery building should give an object lesson in cotton mill engineering.

Power and light are purchased from the local electric power company, and the school supplies its own heat and the steam needed in its finishing plant. The fire protection was designed and installed by the General Fire Extinguisher Company of Providence, R. I., the well-known Grinnell Sprinkler being used. The American Moistening Company, the Bahnson Humidifier Company and the Parks-Cramer Company have installed complete humidifying apparatus. The whole equipment is approved by the Massachusetts State inspectors of public buildings.

DAY CLASSES

The regular day diploma courses of the school are as follows:—

General Cotton Manufacturing.
Chemistry, Dyeing and Finishing.
Designing
Carding and Spinning.
Circular Hosiery Knitting.
Latch Needle Underwear Knitting.

All the above courses are diploma courses, three years long, and are intended to qualify students to hold positions of responsibility in textile manufacturing and allied establishments.

The advantages of these courses to qualify men to hold responsible positions in cotton mills, dyeing and finishing plants, commission houses, etc., are many. These industries, as conducted, are not adapted to give a young man a technical education. The opposite is the case where the primary object is to impart knowledge and to train in the correct method of doing things.

It is not expected that a young man, going from this school, will at once secure an executive position. It is expected, on the contrary, that he will begin in a more humble fashion, that with the knowledge acquired in the school and the experience gained in the mill itself, he will be qualified to hold higher positions, and that his advancement will be much more rapid and his knowledge broader than one who has not had the school instruction and training. That such is the case is shown already by the positions now held by the graduates of the school.

Many of them are occupying positions of trust and responsibility in the textile and allied industries as manufacturers, treasurers, agents, superintendents, assistant superintendents, designers in mills and commission houses, overseers, chemists and dyers, etc. Some have been called to good positions as designers directly from the school, and many who have attended the evening classes have so improved in skill and knowledge that they have advanced in position and earning power.

That the work of the school is recognized by textile manufacturers and those engaged in allied industries is attested by the fact that applications are constant for men of the school—more than can be supplied.

But this school does not agree to make successful men out of lazy, careless and indifferent boys, nor does it care for such boys as students. But for those who wish to learn, who are ready to work, who are willing to bide their time, it does offer an opportunity that will supply them with an honorable vocation, with many opportunities for advancement in the world, with good remuneration.

In case a prospective student feels that no one of the diploma courses meets his particular needs, he is requested to communicate with the Principal, stating his wishes. Whenever possible, special courses will be given in the various departments, for which certificates will be granted, stating the subjects taken and the time given to them. The limitations of these special courses will be determined in every case by the management.

General Cotton Manufacturing Course (I)

First Year

First Term

Pickers and Cards 101 (6½ hrs.).
Weaving 111 (6½ hrs.).
Cloth Analysis 121, 151 (3 hrs.).
Designing 131 (1½ hrs.).
Hand Loom 161 (1½ hrs.).
Principles of Mechanics 171 (1 hr.).
Mechanical Drawing 172 (4½ hrs.).
Chemistry 182 (6½ hrs.).
Yarn Calculations 121 (1½ hrs.).

Second Term

Cards and Drawing Frames 102 (6½ hrs.).
Weaving 112 (6½ hrs.).
Warp Preparation 122 (3½ hrs.).
Designing 132 (1½ hrs.).
Cloth Analysis 152 (3 hrs.).
Hand Loom 161 (1½ hrs.).
Mechanical Drawing 172 (3½ hrs.).
Textile Chemistry and Dyeing 222 (6½ hrs.).

Second Year

First Term

Roving and Spinning Frames 103 (10 hrs.).
Weaving 113 (3 hrs.).
Designing 133 (3½ hrs.).
Cloth Analysis 153 (3½ hrs.).
Machine Drawing 173, 175 (2 hrs.).
Machine-shop Practice 174 (3½ hrs.).
Steam Engineering 176 (1 hr.).
Dyeing 223 (6 hrs.).

Second Term

Doubling, Drafting and Testing 104, 106 (5½ hrs.).
Cotton Sampling 107 (2 hrs.).
Weaving 114 (4½ hrs.).
Designing 134 (3 hrs.).
Cloth Analysis 154 (3½ hrs.).
Machine-shop Practice 174 (3½ hrs.).
Machine Drawing 175 (2 hrs.)
Steam Engineering 176 (1 hr.).
Textile Chemistry 234 (6½ hrs.).
Testing 295 (1 hr.).

Third Year

First Term

Combers and Mules 105 (10 hrs.).
Weaving 115 (6½ hrs.).
Designing 135 (2½ hrs.).
Color 145 (2 hrs.).
Cloth Analysis 155 (3½ hrs.).
Machine-shop Practice 174 (3 hrs.).
Elementary Electricity 177 (2 hrs.).
Knitting 294 (3 hrs.).

Second Term

Carding and Spinning, Practice Work 106 (10 hrs.).
Weaving 116, 117 (6½ hrs.).
Designing 136 (3½ hrs.).
Color 146 (2 hrs.).
Cloth Analysis 156 (3 hrs.).
Mill Engineering 178 (3 hrs.).
Cost Finding 179 (1½ hrs.).
Converting 235–260 (3 hrs.).

General Cotton Manufacturing Course

The course in cotton manufacturing is designed to give the student a thorough fundamental knowledge of the different processes entering into the construction of a piece of cloth from the raw staple to the finished product.

During the first year the student takes up the study of yarn preparation, weaving, designing and cloth analysis. The study of mechanics, mechanical drawing and chemistry is also pursued the first year the work in these subjects being designed especially for men who are to take up the cotton mill work. Instruction in yarn calculations, spooling, warping, and slashing is also offered during the first year.

In the second and third years sufficient time is given to instruction in picking, carding and spinning, while the subjects of weaving, designing and analysis are continued. Practical work in the machine shop is entered upon the second year.

Dyeing is begun the first year, the work being such as is of special interest to the student of cotton manufacturing. The student is also given instruction in steam engineering during the second year, while in the third year, work in electrical engineering and cotton mill construction is offered. The study of color is taken up during the third year. Knitting is also taken up the third year.

The work in all subjects is so arranged that the student is taken gradually from the simpler to the more difficult problems. Much of the work in the last year is original, and the student is thrown on his own resources.

The work in chemistry, dyeing, mechanics and shop practice is all arranged with special reference to the student of cotton manufacturing.

This course is very thorough, and is always recommended to the student who is to make cotton cloth manufacturing his future work.

Designing Course (II)

First Year

First Term	*Second Term*
Weaving 111 (10 hrs.).	Weaving 112 (9½ hrs.).
Cloth Analysis 121, 151 (12½ hrs.).	Warp Preparation 122 (3½ hrs.).
Designing 131 (1½ hrs.).	Designing 132 (1½ hrs.).
Hand Loom 161 (1½ hrs.).	Cloth Analysis 152 (13 hrs.).
Principles of Mechanics 171 (1 hr.).	Hand Loom 161 (1½ hrs.).
Mechanical Drawing 172 (4½ hrs.).	Mechanical Drawing 172 (3½ hrs.).
Yarn Calculations 121 (1½ hrs.).	

Second Year

First Term	*Second Term*
Weaving 113, 114 (6½ hrs.).	Cotton Sampling 107 (2 hrs.).
Designing 133 (3½ hrs.).	Weaving 115 (11 hrs).
Color 145 (2 hrs.).	Designing 134 (3 hrs.).
Cloth Analysis 153, 154 (11 hrs.).	Color 146 (2½ hrs.).
Machine Drawing 173, 175 (2 hrs.).	Cloth Analysis 155 (3½ hrs.).
Machine-shop Practice 174 (3 hrs.).	Machine-shop Practice 174 (3 hrs.).
Steam Engineering 176 (1 hr.).	Machine Drawing 175 (2 hrs.).
General Chemistry 182 (3½ hrs.).	Steam Engineering 176 (1 hr.).
	Textile Chemistry 222 (3½ hrs.).
	Testing 295 (1 hr.).

Third Year

First Term	*Second Term*
Weaving 116 (9½ hrs.).	Weaving 116 (10 hrs.).
Jacquard Designing 135 (8 hrs.).	Jacquard Designing 136 (8 hrs.).
Cloth Analysis 156 (4½ hrs.).	Cloth Analysis 156 (5 hrs.).
Machine-shop Practice 174 (3 hrs.).	Commission House Work 157 (2 hrs.).
Elementary Electricity 177 (2 hrs.).	Finishing 235 (3 hrs.).
Color 146 (2 hrs.).	Mill Engineering 178 (3 hrs.).
Textile Chemistry 222 (3½ hrs.).	Cost Finding 179 (1½ hrs.).

Designing Course

Designing is a branch of textile manufacturing of sufficient importance to call for a separate diploma course, extending over three school years. Since the major subjects in this course are confined to designing, cloth analysis and weaving, the work is somewhat more intensive than in the general course.

The student, during the first year, takes up the study of the plain loom, the more simple designs and the analysis of such fabrics as contain designs similar to those being studied in the designing lessons.

Instruction the first year is also offered in the preparation of warps for the loom, while work in the mechanical department is entered upon the first year, and extends through all three years of the course.

Instruction in the mechanical department is considered essential to the student of designing, as many of the new fabrics brought out by designers from year to year are based as much upon the mechanism of the loom as upon pure design.

During the second year more advanced fabrics, such as double cloths, Bedford cords, piqués and lenos, are studied, both in designing and analysis, while much of the work in the weave room consists of putting original designs into the looms and weaving a short length of each.

Commencing with the first term of the second year, a practical course in color is offered the student, who is required to work out a series of color scales and apply them in coloring designs.

In the second term of this year cotton sampling is introduced.

The third year is largely devoted to the subject of Jacquard designing in both the designing and weaving departments. During this year the subject of commission house work, as it applies to the styling and finishing of new fabrics, is dealt with, and the student is given a close insight into the requirements of this branch of designing.

For the student who wishes to perfect himself in the subject of cloth designing, as applied to the cotton trade, this course will be found very complete.

Chemistry, Dyeing and Finishing Course (III)

First Year

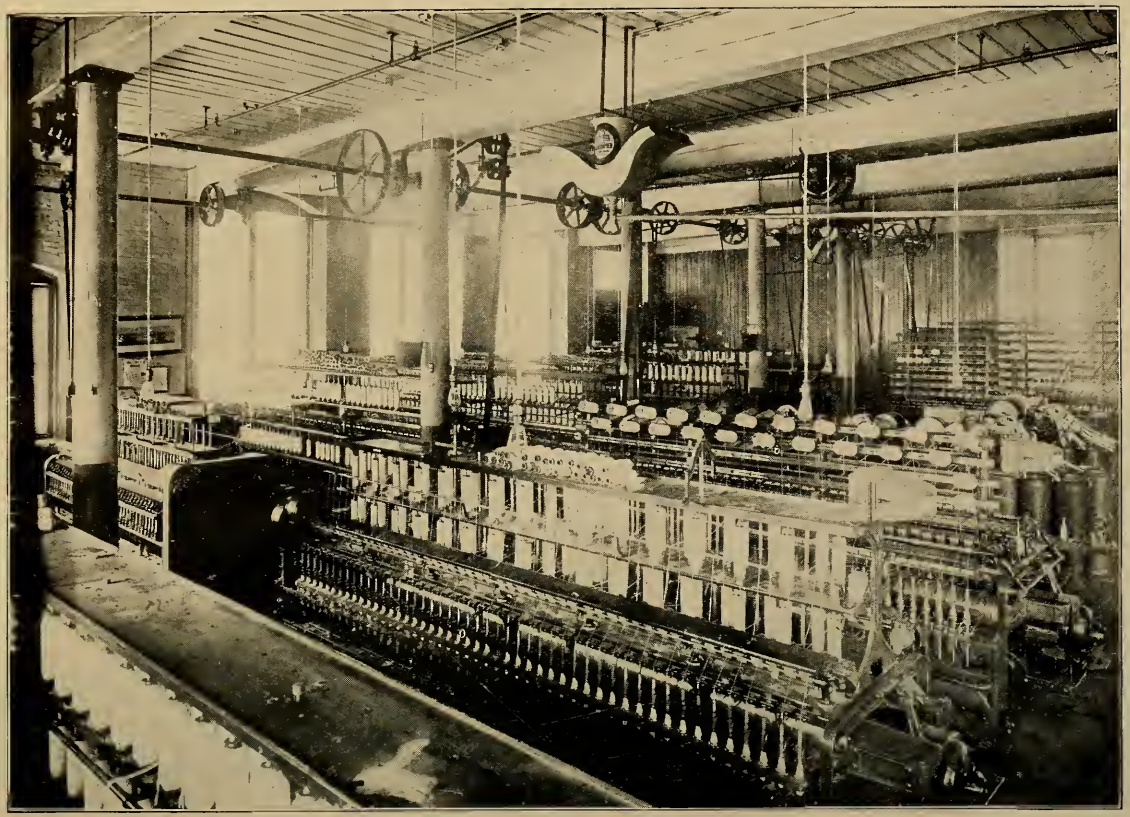
First Term	*Second Term*
Principles of Mechanics 171 (1 hr.).	Mechanical Drawing 172 (3½ hrs.).
Mechanical Drawing 172 (5½ hrs.).	Machine-shop Practice 174 (3 hrs.).
General Chemistry 181 (12½ hrs.).	Qualitative Analysis 191, 192 (13 hrs.).
Inorganic Preparations 183 (10 hrs.).	Organic Chemistry 212 (6½ hrs.).
Designing and Cloth Analysis (3½ hrs.).	Textile Chemistry and Dyeing 222 (6½ hrs.).

Second Year

First Term	*Second Term*
Color 145 (2 hrs.).	Color 146 (2 hrs.).
Machine-Drawing 173, 175 (2 hrs.).	Machine-shop Practice 174 (3 hrs.).
Machine-shop Practice 174 (3 hrs.).	Machine-Drawing 175 (2 hrs.).
Steam Engineering 176 (1 hr.).	Steam Engineering 176 (1 hr.).
Quantitative Analysis 203 (11½ hrs.).	Dyeing 224 (9 hrs.).
Organic Chemistry 213 (6½ hrs.).	Textile Chemistry 233 (3½ hrs.).
Dyeing 223 (6½ hrs.).	Cotton Sampling 107 (2 hrs.).
	Cotton Manufacturing 230 (1½ hrs.).
	Quantitative Analysis 202 (7½ hrs.).
	Cotton Testing, 295 (1 hr.).

Third Year

First Term	*Second Term*
Machine Shop 174 (3 hrs.).	Machine Drawing 175 (3 hrs.).
Elementary Electricity 177 (2 hrs.).	Drying 250 (4 hrs.).
Dyeing 225 (6½ hrs.).	Calendering 255 (4 hrs.).
Singeing 240 (2 hrs.).	Putting up 260 (2 hrs.).
Scouring 241 (5 hrs.).	Thesis 269 (13 hrs.).
Bleaching 242 (3 hrs.).	Textile Chemistry 234 (6½ hrs.).
Mercerizing 245 (1 hr.).	
Textile Chemistry 234 (10 hrs.).	



Carding and Spinning Department, showing Roving and Spinning Frames

Chemistry, Dyeing and Finishing Course

The object of this course is to give to the student a thorough knowledge of the chemistry of the textile processes involved in the manufacture of cotton cloth. To insure a perfect foundation, the first two years are devoted almost entirely to chemical subjects and laboratory work. During this period the subjects of general chemistry, inorganic and organic, are taught, the preparation and properties of various chemicals and dyestuffs, the properties of the various fibers, and the coloring of them.

The third year is devoted almost entirely to the practical dyeing and finishing of cotton goods. The best current practice is followed, but the underlying principles are thoroughly taught in order that the student may understand the limitations and purpose of each process.

The subjects of machine drawing, principles of mechanics, electricity and shop work are taught. These allied subjects are arranged with special reference to the major subjects, and are considered very important, as they give the student a first-hand knowledge of the construction of the various machines.

The graduates of this course find employment with dyestuff makers and dealers, with manufacturers of chemicals used in dyeing, with bleacheries, dye houses and finishing works.

It is desirable that students entering this course shall have successfully completed a scientific course in high school or its equivalent. Any one, however, who can show by examination his ability to profit by the instruction given is admitted.

Circular Hosiery Knitting Course (IV)

First Year

First Term	*Second Term*
Pickers and Cards 101 (6½ hrs.).	Cards and Draw Frames 102 (6½ hrs.).
Principles of Mechanics 171 (1 hr.).	Mechanical Drawing 172 (3½ hrs.).
Mechanical Drawing 172 (4½ hrs.).	Machine-shop Practice 174 (3 hrs.).
Chemistry 182 (6½ hrs.).	Textile Chemistry and Dyeing 222 (6½ hrs.).
Knitting 271 (12½ hrs.).	Knitting 271 (13 hrs.).
Yarn Calculations 121 (1½ hrs.).	

Second Year

First Term	*Second Term*
Roving and Spinning Frames 103 (6½ hrs.).	Doubling and Drafting 104 (5½ hrs.).
Machine Drawing 173, 175 (2 hrs.).	Cotton Sampling 107 (2 hrs.).
Machine-shop Practice 174 (3½ hrs.).	Machine-shop Practice 174 (3½ hrs.).
Steam Engineering 176 (1 hr.).	Machine Drawing 175 (2 hrs.).
Dyeing 223 (6 hrs.).	Steam Engineering 176 (1 hr.).
Knitting 272 (13½ hrs.).	Textile Chemistry 234 (6½ hrs.).
	Knitting 273 (11 hrs.).
	Testing 295 (1 hr.).

Third Year

First Term	*Second Term*
Machine-shop Practice 174 (3½ hrs.).	Mill Engineering 178 (3 hrs.).
Elementary Electricity 177 (2 hrs.).	Dyeing 226 (9½ hrs.).
Dyeing 226 (5 hrs.).	Knitting 274, 293 (17½ hrs.).
Knitting 274, 293 (19½ hrs.).	Color 146 (2½ hrs.).
Color 146 (2½ hrs.).	

Circular Hosiery Knitting Course

The course in circular hosiery knitting is adapted to the needs of those students desiring a thorough knowledge of the hosiery industry.

The instruction given covers both the technical and practical parts of the business, including cost finding.

A part of the time is devoted to instruction on the knitting machines.

During the first year the student takes up the winding and preparation of cotton, lisle, wool, worsted and silk yarns for use on hosiery machines; also the principle of circular latch-needle knitting, and the setting and adjusting of different makes of rib-leg and rib-top machines.

In the second and third year, the time is given up to a study of the different makes of automatic hosiery machines, knitting men's half hose, ladies' hose, footing, children's and infants' hose, looping, welting and mending; method of handling and keeping account of goods through the mill; cost of manufacturing from yarn to the box.

Instruction is also given in cotton yarn preparation, yarn calculations, cotton sampling, mechanics, steam engineering, chemistry and dyeing, the work in these different subjects being arranged to meet the special needs of the student.

This course is recommended to those students who intend to become connected with a hosiery mill.

Latch Needle Underwear Knitting Course (V)

First Year

First Term	*Second Term*
Pickers and Cards 101 (6½ hrs.).	Cards and Draw Frames 102 (6½ hrs.).
Principles of Mechanics 171 (1 hr.).	Mechanical Drawing 172 (3½ hrs.).
Mechanical Drawing 172 (4½ hrs.).	Machine-shop Practice 174 (3 hrs.).
Chemistry 182 (6½ hrs.).	Textile Chemistry and Dyeing 222 (6½ hrs.).
Knitting 281 (12½ hrs.).	Knitting 281 (13 hrs.).
Yarn Calculations 121 (1½ hrs.).	

Second Year

First Term	*Second Term*
Roving and Spinning Frames 103 (6½ hrs.).	Doubling and Drafting 104 (5½ hrs.).
Machine Drawing 173, 175 (2 hrs.).	Cotton Sampling 107 (2 hrs.).
Machine-shop Practice 174 (3½ hrs.).	Machine-shop Practice 174 (3½ hrs.).
Steam Engineering 176 (1 hr.).	Machine Drawing 175 (2 hrs.).
Dyeing 223 (6 hrs.).	Steam Engineering 176 (1 hr.).
Knitting 282 (13½ hrs.).	Textile Chemistry 234 (6½ hrs.).
	Knitting 283 (11 hrs.).
	Testing 295 (1 hr.).

Third Year

First Term	*Second Term*
Machine-shop Practice 174 (3½ hrs.).	Mill Engineering 178 (3 hrs.).
Elementary Electricity 177 (2 hrs.).	Dyeing 226 (9½ hrs.).
Dyeing 226 (5 hrs.).	Knitting 284, 293 (17½ hrs.).
Knitting 284, 293 (19½ hrs.).	Color 146 (2½ hrs.).
Color 146 (2½ hrs.).	

Latch Needle Underwear Knitting Course

The course in latch needle underwear knitting is adapted to those students intending to become connected with this branch of the textile industry.

As in the case of the hosiery course, part of the student's time is devoted to instruction work on the knitting and sewing machines. Instruction is also given in cotton yarn preparation, yarn calculations, mechanics, steam engineering, cotton sampling, chemistry and dyeing. As is the case with all other courses offered, instruction in these correlated subjects is arranged best to meet the needs of each individual course.

Both of the knitting courses are very thorough, and give the student a good working knowledge of the different processes and the machinery connected with the same. The knitting department of the New Bedford Textile School contains a

larger variety of knitting machinery than is found in any similar school in the United States, and the courses offered in this department cannot fail to be of very great benefit to any one desiring knowledge along these lines.

Carding and Spinning Course (VI)

First Year

First Term	*Second Term*
Picking, Carding, Roving 300 (15 hrs.).	Drawing, Spinning, Doubling and Drafting 302 (13½ hrs.).
Mechanical Drawing 172 (3 hrs.).	Machine Shop 174 (3 hrs.).
Chemistry 182 (6½ hrs.).	Mechanical Drawing 172 (3 hrs.).
Knitting 301 (6½ hrs.).	Chemistry and Dyeing 222 (6½ hrs.).
Yarn Calculations 121 (1½ hrs.).	Knitting 301 (6½ hrs.).

Second Year

First Term	*Second Term*
Combers and Mule Spinning 303 (13½ hrs.).	Spinning, Twisting and Cotton Classing 304 (12½ hrs.).
Knitting 301 (6½ hrs.).	Knitting 301 (6½ hrs.).
Steam Engineering 176 (1 hr.).	Steam Engineering 176 (1 hr.).
Machine Drawing 173–175 (2 hrs.).	Machine Drawing 175 (2 hrs.).
Dyeing 223 (6½ hrs.).	Textile Chemistry 234 (6½ hrs.).
Machine Shop 174 (3 hrs.).	Machine Shop 174 (3 hrs.).
	Testing 295 (1 hr.).

Third Year

First Term	*Second Term*
General Test Work and Roll Covering 305 (21 hrs.).	Yarn Testing and Comber Reneedling 306 (19½ hrs.).
Knitting 301 (6½ hrs.).	Knitting 301 (6½ hrs.).
Elementary Electricity 177 (2 hrs.).	Mill Engineering 178 (3 hrs.).
Machine Shop 174 (3 hrs.).	Machine Drawing 175 (2 hrs.).
	Cost Finding 179 (1½ hrs.).

Carding and Spinning Course

The course in carding and spinning is designed to give the student a thorough knowledge of cotton yarn manufacture.

The larger part of the students' time is devoted to instruction on the different machines used in the preparation of cotton yarn.

Instruction is also given in knitting, mechanics, steam engineering, chemistry and dyeing. Considerable time is given to knitting, as that industry is closely related to cotton yarn manufacture.

This course is recommended to those students who intend to become connected with cotton yarn mills or to become cotton yarn salesmen.

Secretarial Course (VII)

First Year

First Term	*Second Term*
Cotton Yarn Preparation (12 hrs.).	Cotton Yarn Preparation (13½ hrs.).
Weaving (3½ hrs.).	Weaving (3½ hrs.).
Cloth Analysis (12½ hrs.).	Cloth Analysis (9 hrs.).
Yarn Calculations (1½ hrs.).	Designing (1½ hrs.).
Designing (1½ hrs.).	Converting (3½ hrs.).
Hand Loom (1½ hrs.).	Hand Loom (1½ hrs.).

SECOND YEAR

First Term	*Second Term*
Cotton Yarn Preparation (9½ hrs.).	Cotton Yarn Preparation (9½ hrs.).
Weaving (3 hrs.).	Weaving (4½ hrs.).
Designing (7 hrs.).	Designing (8½ hrs.).
Cloth Analysis (5 hrs.).	Cost Finding (1½ hrs.).
Color (2 hrs.).	Color (3½ hrs.).
Knitting (6 hrs.).	Knitting (5 hrs.).

Secretarial Course

This course is designed for young women who have had a high school education and wish to prepare themselves for mill office work. It is arranged to give the student a knowledge of all the different processes in the manufacture of yarn and cloth and the finishing of the same. It covers all calculations required in laying out draft schedules, production costs, cloth construction and designing and all testing and research work required in cloth manufacture and finishing.

This is a certificate course and can be completed in two years.

Junior Manufacturing Course (VIII)

FIRST YEAR

First Term	*Second Term*
Pickers and Cards (9½ hrs.).	Cards and Drawing Frames (9½ hrs.).
Weaving (3½ hrs.).	Weaving (3½ hrs.).
Work in Design Dept. (10 hrs.).	Work in Design Dept. (10 hrs.).
Mechanical Drawing (3 hrs.).	Mechanical Drawing (3 hrs.).
Arithmetic (3 hrs.).	Arithmetic (3 hrs.).
Machine-shop Practice (3½ hrs.).	Machine-shop Practice (3½ hrs.).

SECOND YEAR

First Term	*Second Term*
Cotton Yarn Preparation (6½ hrs.).	Cotton Yarn Preparation (6½ hrs.).
Weaving (6½ hrs.).	Weaving (6½ hrs.).
Designing (1½ hrs.).	Designing (1½ hrs.).
Knitting (3 hrs.).	Knitting (3 hrs.).
Chemistry (3 hrs.).	Chemistry (3 hrs.).
Mechanics and Drawing (7 hrs.).	Mechanics and Drawing (7 hrs.).
Hand Loom (1½ hrs.).	Hand Loom (1½ hrs.).
Cloth Analysis (3½ hrs.).	Cloth Analysis (3½ hrs.).

Junior Manufacturing Course

This course is arranged for students of fourteen years of age or over who have had a grammar school education and wish to obtain some knowledge of cotton manufacturing before entering the mill.

This course is so arranged that a student taking it can obtain a fair working knowledge of the different processes in the making of cotton cloth from the raw stock to the woven or knitted fabrics. It covers Cotton Yarn Preparation, Warp Preparation, Weaving, Cloth Construction, Simple Designing, Mechanical Drawing, Machine-shop Practice, Calculations, Knitting and Chemistry.

A certificate course can be completed in two years. If at the end of this time, the student wishes to take the regular diploma course, he can do so by taking two years more, completing the regular diploma course in four years.

This course is recommended for boys who wish to obtain a textile education but cannot afford to spend seven years after graduating from the grammar school.

Mechanical Course (IX)

First Year

First Term	*Second Term*
Shop Mathematics 169 (3 hrs.).	Shop Mathematics 169 (3 hrs.).
Mechanical Drawing 172 (9½ hrs.).	Mechanical Drawing 172 (10 hrs.).
Machine Shop 174 (20 hrs.).	Machine Shop 174 (19½ hrs.).

Second Year

First Term	*Second Term*
Steam Engineering 176 (1 hr.).	Steam Engineering 176 (1 hr.).
Elementary Electricity 177 (2 hrs.).	Machine Drawing and Design 175 (26½ or 6½ hrs.).
Machine Drawing and Mechanism 175, 173 (24 or 9½ hrs.).	Machine Shop 174 (25 or 5 hrs.).
Machine Shop 174 (20 or 5½ hrs.).	

Mechanical Course

The mechanical course is arranged for those students who have a natural leaning towards mechanical things. A practical knowledge of the mechanical side of a textile mill may be obtained by those attending this course.

During the first year all of the students spend the same amount of time in the various subjects, but during the second year, the major part of the time can either be spent in the machine shop or the drafting room.

A certificate course can be completed in two years, and, if the student so desires, he may specialize for another year either in the drafting room or the machine shop.

This course will fit the students to enter engineering offices, drafting rooms, machine shops, planning departments of various machine builders and other lines of employment.

Textile Fabric Course

This course is designed for persons interested in different kinds of textile fabrics, their manufacture, finishing and marketing. It should be especially instructive to persons employed in buying and selling finished goods.

1. It is proposed to discuss the different kinds of cotton and their adaptability to different kinds of fabric.

2. A general idea of how yarns are made and the objects of the different machines used. The different terms used in making yarns, such as "Break", "Turns per Inch" etc. Testing for strength. Effect of moisture etc.

3. Weaving. The different kinds of looms used and the cloth produced. Difference in weaving Plain, Sateens, Twills, Shirtings, Lenos and Jacquards.

4. Analyzing cloth to distinguish the different fibres, such as cotton, wool, worsted, linen, silk and rayons.

5. Study a number of designs commonly used, analyzing a few samples of cloth, finding yarns used, percentage of different yarns, weight and cost.

6. A study of different fabrics, showing how to distinguish one kind from another.

7. Qualification of fabrics for different purposes.

8. Methods of finishing fabrics.

Textile Discussion Course

This course is designed for persons employed in executive positions or for workers in the different departments, such as overseer, second hand, third hand, etc.

1. A discussion of different cottons and their adaptability for different goods.

2. Handling cotton when received at the mill. Mixing, picking, carding, drawing, combing, roving and spinning.

REFERENCES FROM TABULATED COURSES

101. Pickers and Cards

Cotton yarn mill machinery. Lists of processes in cotton mills for different numbers of yarn. Proper sequence of processes.

Objects of blending cotton. Methods of mixing same. Bale breakers.

Picker rooms. Automatic feeders. Construction of different varieties of feeders. Their capacity and suitability for the purpose intended.

The cotton opener, its use and object. Various styles of openers. Setting and adjustment of openers. Connection of feeders to openers. The various styles of trunks. Calculations in connection with openers. Breakers. Intermediate and finisher lappers. Different styles and makes of machines. Use and object of the lapper. Construction of aprons, beaters, bars, screens, fans, lap heads, evener and measuring motions, etc. The setting and adjustment of lappers. Calculations in connection with lappers.

The revolving flat card. Its principal parts described, including feed, licker, cylinder, doffer, coiler, screens and flats. Different setting arrangements. Speeds of different parts. Top flat cards, roller and clearer, and other cotton cards. Clothing, grinding, setting and stripping cards.

102. Cards and Drawing Frames

Study of the card continued.

The railway head as used either independently or combined with sections of cards. Single and double railway heads. Eveners, draft calculations, metallic and other rolls.

Method of arranging and constructing drawing frames. The use and objects of the frame. Gearing, weighting, stop-motions, varieties of rolls, etc.

103. Roving Frames, Spinning Frames and Twisters

Slubbers. First and second intermediates. Roving or jack frames. The construction and use of the fly frame. Description and use of the different parts. Calculations in connection therewith. Changing and fixing frames, etc.

The spinning frame. Its construction and use. Its principal parts, such as creels, rolls, rings, travelers, speeds, builder motions, etc.

The objects of twisting. Wet and dry twisting. The direction and amount of twist in different ply and cord threads; different methods used in preparing yarn for twisting. Size of rings and travelers for different counts of yarn. Methods of winding, speeds and production.

104. Doubling and Drafting

Figuring the number of doublings and drafts from picker to spinning frame or mule.

Calculations for schedules of machinery required for different counts and amounts. Cost and production of yarn.

Practice work consists of carrying work through picker to spinning frames.

105. Combers and Mules

The sliver and ribbon lap machines. Construction of American and English machines. Methods of operating same. Setting and adjusting same, and calculations in connection therewith.

The cotton comber. The construction of the comber, its use and objects. Comber setting. Comber calculations. Operation and management of combers.

The spinning mule and its uses. The special features of the mule. Description of the head stock, the cam shaft, mule carriage and other parts. The construction and use of each part of the mule. Different movements in the mule and the timing of the same. The copping rail and the building of a cop. Faults in mule spinning and their correction. Mule calculations.

106. Tests

Original work in laying out processes for different counts of yarn, and carrying the same through from raw cotton to finished yarn. Tests for different processes. Methods of testing from bale to finished fabrics.

107. Raw Cotton

Raw cotton. Its varieties. The cultivation of cotton. The preparation of cotton for the market. Cotton ginning. Cotton as an article of commerce. The selection of cotton, its suitability for different purposes.

111. Plain Looms

The construction of the plain loom. The principal movements in weaving. Methods of shedding. Shedding motions. Shedding by cams. Auxiliary shafts. Variety of cams. Construction of cams. Timing cams and effect on the cloth.

Picking motions. Different methods of picking. Shuttles. Shuttle boxes. Shuttle guards. Protector motions. Reeds. Let-off motions. Take-up motions. Calculations in connection with take-up motions.

Filling-stop motions.

Temples. The various makes and their uses.

The Draper loom. Special feaures of its construction.

Automatic shuttle and bobbin changing looms.

Special features of the various makes of looms including Crompton & Knowles, Whitin, Mason and Stafford looms.

The management, operation and fixing of looms. Putting in warps. Faults and remedies in weaving and fixing. Calculations directly connected with plain looms.

Looms adapted to weave twills and satins.

Mechanical warp stop-motions.

112. Fancies

Looms adapted to weave fancy cloth with dobbies. Dobby construction, timing and setting for single and double index dobbies. Chain pegging for dobbies.

Tying in and starting up warps for which the student has worked out some design. Timing and setting and practical work on 2 x 1 box looms.

113. Box Looms

Looms for the use of various colors of filling. Drop box motions. Box chain multipliers. Multiplier motions. Still box motion.

114, 115. Special Loom Attachments

Dobby looms combined with other motions for special purposes, such as looms adapted to weave lenos with cotton and wire doups and all modern equipment, checks, blankets, handkerchiefs, towels and other goods.

Draper looms. Practical setting of the magazines, feeler and warp stop motions.

Stafford and Automatic looms. Practical setting of the magazines, feeler and warp stop motions for shuttle changing and bobbin changing looms.

Crompton & Knowles Automatic 4 x 1 Box looms. Practical setting of the magazine, multipliers and warp stop motions.

116. Jacquards

The principle of construction of Jacquard machines. Single and double lift machines. Jacquard machines for special purposes. Principles of harness tying. Practical work in cutting cards and weaving the student's own designs.

117. Dobby Automatic Looms

Dobby automatic looms adapted to weaving ginghams, crêpe effects and handkerchiefs. Special features of their construction. Practical work with modern wire doup lenos.

Suggestions for the management of the weave room.

121. Yarn Calculations

Definitions. Calculations for finding length, weight or counts of single yarns, whether cotton, woolen, worsted, silk, etc. Ply yarns.

122. Spoolers, Warpers and Slashers

Various methods of preparing cotton warps.

The spooler, its use and construction. Production per spindle. Spindle speeds. Builder motions. Thread guides. Different makes of spoolers.

The operation and setting of the spooler.

Warpers. The object of the warper. Its construction and operations. Speeds, settings, etc. Warpers with and without cone drive. Warper slow motions. Faults in warping and their correction.

The slasher. Its use. Construction of the different parts of the slasher.

Sizing or dressing yarns. Materials used. Methods of mixing same. Suitable materials for various purposes.

Preparing the warp for the loom. The construction of reeds and harnesses.

Variations from the above system for special purposes, such as used in gingham and other mills.

131. Designing

Definitions of the words and terms used in designing and analysis. Characteristics of the various classes of fabrics. Design paper and its application to designing and analysis. Cloth structure, with a study of the various sources from which the patterns of fabrics are obtained. Twills, Wave effects. Diamonds, Sateens. Granites. Checkerboards. Rearranged twills. Figured twills.

132. Designing

Designing for single fabrics continued, such as honeycombs. Mock and imitation lenos. Entwining twills. Spots weaves arranged in various orders. Cord weaves. Imitation welts. Elongated twills. Check effects. Corkscrew weaves. Four change system of designing. Damask weaves.

133. Designing

Designing for more complicated fabrics, such as figure fabrics, using extra material. Fabrics backed with extra material. Fabrics having the face and back of different material or pattern. Double plain fabrics. Reversible fabrics. Embossed effects, such as Bedford cords, piqués, Marseilles weaves.

134. Designing

Designing for leno, pile and lappet fabrics, such as methods of obtaining leno patterns. Mechanical appliances for the production of lenos, yoke and jumper motions. Bottom doups. Top doups. Check lenos. Jacquard leno-effects. Weaving with wire doups. Weaving with the bead motion. Russian cords. Marquisettes. Full turn lenos.

Pile fabrics, such as velveteens, corduroys, velvets, plushes, carpets, terry toweling.

Lappett weaves. Description of the various lappett motions. Designing for original lappett effects. Reproduction of woven lappet patterns. Chain drafts. Locking motions. Spot effects.

135. Jacquard Designing

Design paper. How to figure the design paper necessary to reproduce any Jacquard pattern. Defects of Jacquard patterns and how to avoid them. Transferring designs to plain paper. Transferring sketches to design paper. Changing the sley of Jacquard fabrics. Method of casting out. Ground weaves. Rules for finding sley, pick, warp and filling. Foundations upon which Jacquard patterns are based.

136. Jacquard Designing

Different methods of making designs. Sketching original designs by the different methods commonly used. Working out the sketches upon design paper. Cutting cards on the piano card-cutting machine. Card lacing. Weaving of at least one original design. Method of weaving Jacquard leno designs. Mechanisms required in weaving Jacquard lenos. Making Jacquard leno designs.

Harness tying. Various systems of tying Jacquard harnesses. Lay-over ties. Center ties. Compound ties.

145. Color

Theory of colors. Complementary colors. Hue, value and chroma scales. Practical work in color scales.

146. Color

Munsell system of coloring. Color harmony, color effects. Analyzing color effects. Practical work in making sequences and in producing colored designs.

Weaving Department, showing Fancy-weave Room

151. Analysis

Standard methods of representing harness and reed drafts. Harness drafts on design paper. Written harness drafts. Chain drafts. Layout plans. Finding weight of warp yarns, weight of filling yarns. Yards per pound of cloth.

152. Analysis

Finding counts of warp and filling by various methods. Finding yards per pound of cloth from a small sample by weighing. Making original designs and weaving them on the power loom. Reproduction of woven samples.

153. Analysis

Analyzing more difficult samples. Finding average counts. Percentage of each material. Production of loom. Price per yard for weaving. Weaving of more difficult original designs.

154. Analysis

Analysis of leno fabrics, making both written drafts and harness drafts on design paper. Chain drafts. Weaving of original leno designs. Changing the construction of fabrics and preserving balance of structure.

155. Analysis

Analysis of more difficult samples continued. Weaving of original samples. Work on changing over samples to different constructions.

156. Analysis

Continuation of the work outlined in 155. Weaving of students' original Jacquard designs. Work on cost of manufacturing fabrics.

157. Commission House Work

Study of fabrics known as standard goods, such as prints, percales, satins, lawns, organdies, chambrays, voiles, etc.

Figuring to obtain material for the reproduction of cloths of standard construction.

Methods of ascertaining counts of warp and filling; also sley and pick for new fabrics.

Determining the manufacturing cost of fabrics.

Working out sketches and writing specifications for new fabrics.

161. Hand Loom

The hand loom, its construction and use. Harness drafts as affecting the weave. Building harness chains. Practice on the hand loom in weaving fabrics from original and other designs, and putting into practice the designing lessons.

169. Shop Mathematics

Shop mathematics consists of a review of arithmetic for those who have only an elementary knowledge of mathematics and then branches out in the various standard formulas and data that are necessary for every mechanical superintendent to know. It deals with shop, drafting room, steam and electrical trades.

Various subjects such as trigonometry, logarithms, graphical charts, strength of materials, gearing and mechanisms, etc., are taken up in the class room.

Textbook: "Industrial Mathematics," Farnsworth.

171. Mechanics

The fundamental principles of mechanics and physics, with special reference to practical uses in textile machinery and to future application in the engineering courses, are given in a series of lectures. Practical problems illustrating these principles are worked out in the class room. A study is also made of the strength and nature of the different materials used in machine construction.

Textbook: "Practical Mechanics," Hale.

172. Mechanical Drawing

The object of this course in mechanical drawing is to give the student a good foundation for reading drawings and for making such sketches and drawings as he

will be likely to be called on to make in practice. Thoroughness, accuracy and neatness are insisted upon throughout the course. The work in mechanical drawing begins with instruction in the use and care of drawing instruments. The following is a general outline of the work to be covered: plain lettering, geometrical constructions, orthographic and isometric projection, inking and tracing, standards, conventions and tabulation as used in the modern drafting room. Simple working drawings are to be made to scale, and the final work of the year consists of free-hand sketching of machine details from parts of textile machinery. This brings into use at one time all the work covered during the year, and serves as a test of the student's grasp of the subject.

173. Mechanism

In view of the large number of mechanisms used in textile machinery this course is a very important one. The subject is given by means of lectures and recitations, the work in the drawing room being closely related to the classroom instruction. This course includes studies and graphical solutions of cams, gears, etc.

174. Machine Shop

Shopwork and drawing are organized as one department for the purpose of securing close correlation of the work. Many exercises are cómmon to the drawing room and the shop. In the machine shop an effort is made, not only to train the student manually, but also to teach him correct shop methods and practice. Carefully graded exercises are arranged to teach him the use of measuring instruments, hand tools and then machine tools. The different measuring tools and devices, with advantages, methods of use and limits of accuracy of each, are considered. Each cutting tool is taken up, its cutting angles and general adjustments are described, together with the "feeds" and cutting speeds suitable for each material worked and for each machine. The course includes instruction in centering, squaring, straight and taper turning and fitting, outside and inside screw cutting, chucking, reaming, finishing and polishing, drilling, tapping, grinding, boring, planing flat and V surfaces, filing and gear cutting, including spur, bevel, rack and worm gears.

When the student becomes proficient in handling the tools and machines, he is given work in fitting and assembling, and also repair work from other departments.

175. Machine Drawing

Machine drawing is a continuation of the mechanical drawing of the first year, and the work is dependent upon a thorough knowledge of how to apply the conventions of drawing which custom has made standard as given during the first year. The work consists of proportioning of machine details as fixed by practice, making assembly drawing from detailed sketches, and also detailing parts from assembled machines.

176. Steam Engineering

A typical power plant, including the boiler, steam engine and all necessary auxiliary apparatus such as is found in a modern cotton mill, is studied in detail. Prepared outlines are discussed in lecture periods, and the details supplied by the student after reading assignments in standard text and reference books. Practice is given in handling engines, apparatus and equipment in the laboratory. Exercises consist in adjusting, starting and running engines, taking and working out indicator cards, prony brake tests, pump and injector tests, etc.

177. Elementary Electricity

The elementary principles of magnetism and electricity are taken up in lecture and recitation, and are supplemented by laboratory exercises. Emphasis is placed on the different wiring systems and electric drives as used in mills and factories. A general study is made of a typical electrical power plant, and of the apparatus required to generate and distribute electrical energy.

Textbook: "Essentials of Electricity," W. H. Timbie.

178. Mill Engineering

Proficiency in this course depends on the thoroughness with which the work of the previous courses was carried on. The course consists of lectures supplemented

by work in the drafting room. Problems in design, construction and equipment of mills and factories are taken up. The subject includes foundations, walls, floors, roofs and mill construction in general. The choice of location and the methods of transmitting power are discussed. The following outline shows the scope of the course: principles underlying the design and construction of framed structures, involving the use of wood, steel, brick, stone, concrete and reinforced concrete, methods of lighting, ventilating and protecting from fire.

179. Figuring Costs

One and a half hours a week, during the last term of the general course, is devoted to methods of cost finding in a cotton mill. A complete mill is taken for an illustration, and the reports of both the expense and production are used to work with.

181. General Chemistry

This course comprises three lectures of one hour each and nine and one-half hours of laboratory work each week. The laboratory work is closely criticized by the instructor, and individual effort encouraged. Careful manipulation, thoroughness in observation, accuracy in arriving at conclusions and neatness are required of each student. The fundamental principles of the science are taught in connection with the descriptive chemistry of the elements.

No previous study of chemistry is required for admission to this course, but the instruction is so arranged that students having already spent considerable time in chemistry in other schools are given advanced work in which the knowledge already acquired is utilized.

Textbook: Smith's "College Chemistry."

182. General Chemistry

The training afforded by a course in general chemistry is considered of value to all the students of the school and also lays the foundation for the subsequent course in dyeing. Hence, students taking courses in the cotton or knitting departments are required to take general chemistry during the first term of the first year. This subject covers the same ground as subject 181, but in a briefer manner. Five hours per week are spent in the laboratory and one hour in the lecture and recitation room.

Textbook: Smith's "Elementary Chemistry."

183. Inorganic Preparations

The time in this subject is devoted largely to laboratory work, with an occasional explanatory lecture. First the student is taught the best methods of carrying on the usual laboratory operations, as forming of crystals, precipitates, filtering, evaporating and drying. This is followed by the preparation of several salts and industrial products, substances being selected that are of particular interest to the textile industry. The work is progressive in subject-matter, and so arranged as to be co-ordinate with the subject of general chemistry.

191-192. Qualitative Analysis

This course comprises one lecture of one hour and twelve hours' laboratory work a week during the second term of the first year. The student is taught the principle of systematic qualitative analysis and the application of the principles to detect the base-forming elements, the acid-forming elements, and the various classes of compounds of the bases and the acids. Especial attention is paid to the inorganic materials ordinarily met with in the manufacture, dyeing and finishing of cotton piece goods. The student is required to analyze correctly a sufficient number of unknown substances to demonstrate his ability to detect any of the elements ordinarily met with.

Textbook: Noyes' "Qualitative Analysis."

202. Quantitative Analysis

The course in Quantitative Analysis is divided into two parts each requiring one term for its completion. Stress is laid on the accuracy and integrity necessary for quantitative work. Each student is required, under supervision of the instructor,

to adjust his own balances, and calibrate the weights, burettes, flasks, etc., that he uses, that he may understand the nature and amount of error in his work, thus giving him confidence in his results. In connection with the course a thorough training in the solution of chemical problems is given. The course comprises one lecture each week, the remainder of the time being devoted to laboratory practice. The first term is spent in gravimetric determination of chlorine, sulfuric, carbonic, and phosphoric acids, and iron, aluminum, calcium and magnesium.

203. Quantitative Analysis

This course is a continuation of Course 202 and comprises volumetric analysis involving the use of acids, alkalis, oxidizing and reducing agents, and chlorimetry. The work on chemical problems is also continued through this term, the problems being such as to apply the principles of volumetric analysis.

212. Organic Chemistry

This course is divided into two terms, the first term giving a general survey of the subject, a thorough training being given in the reactions and properties of the various compounds met with in textile industries. The two lower members of the paraffines and their derivatives are exhaustively treated. Then the study of the higher members is taken up, the unsaturated hydro-carbons and their derivatives.

Textbook: Remsen & Orndorff's "Organic Chemistry."

213. Organic Chemistry

The work of the second term is devoted exclusively to the study of dyestuffs and their preparation. The constitutions of various typical dyestuffs are studied to determine their influence on coloring power, dyeing properties and fastness to light, acids, alkalis, bleaching, etc. In the limited time afforded, the number of dyestuffs studied is necessarily limited, but the training is made so thorough that the student is enabled to take up further investigation intelligently should his future work demand it.

222. Textile Chemistry and Dyeing

These subjects open with a study of the chemical and physical technology of the fibers. Lectures are given descriptive of the action of heat, moisture, acids, alkalis, oxidizing agents, reducing agents, salts, organic ferments and coloring matter upon the fibers. Parallel with these lectures laboratory experiments are carried out by the performance of which the student becomes familiar with the chemical and physical properties of the various fibers and the actions of the several agents upon them.

This is followed by a series of lectures and experiments that illustrate the application of the above principles to practice. The student is taught how to scour cotton, wool and silk; how to bleach these fibers by the use of sulphur dioxide, chlorine compounds and oxygen compounds. The mercerizing, fireproofing and waterproofing of cotton, the chlorination of wool, and the waterproofing of silk are also demonstrated.

Now the application of the dyestuffs to the various fibers is studied. For convenience the dyestuffs, whether of natural or synthetic origin, are classed as either substantive, acid, basic or mordant. The best method of application of each of the above groups is then taught. The dyed fibers are tested for their fastness to light, water, acid, alkalis, milling, stoving, chloring, crocking and hot finishing. Modified methods are then considered for the production of especial degrees of fastness to certain agents by after-treating of the dyed fibers.

223. Dyeing

This course is supplementary to the course in textile chemistry and dyeing and consists principally in the application of dyes to cotton and practice in color matching. Lectures are given as the occasion requires, but most of the time is spent in the laboratory.

At the end of the course the general principles of cotton matching are taken up, and experimental work is carried on demonstrating the proper method of obtaining a given shade by mixing several dyes. Obtaining the value of a dye is taught,

and the detection of adulterants. Finally, methods for determining the dye, either in the form of a dyestuff or on the dyed fabric, are considered.

Samples acquired in connection with the laboratory practice are mounted and bound with the above notes, which they serve to illustrate.

224. Dyeing

The laboratory work of this term is mainly devoted to the printing of textile fabrics, especial emphasis being laid on cotton. The theory and practice of the various styles, such as the pigment style, the direct printing style, the steam style, or metallic or tannin mordants, resist and discharge dye styles, the developed azo style, the printing of indigo and similar dye stuffs and aniline black are studied. The student makes as many different prints as the time will allow. During the entire course the student accumulates many samples which he is required to mount in a specially designed sample book for his reference in the future. Special stress is laid on quality rather than quantity of work done. As often as time permits and circumstances demand it, lots of yarn, hosiery, etc., of commercial size are dyed by the students for other departments.

225. Dyeing

Construction and operation of jiggers. Speed of operation. Penetration of solutions used. Selection of dyestuff. Preparation of dye liquor. Dyeing, washing and after-treating.

Construction of dye padders. Selection of material for rolls. Speed of machines. Penetration of materials. Selection of dyestuffs. Washing off. After-treatment.

226. Dyeing of Knit Goods

The object of this course is to give the student an opportunity to dye commercial size lots of knit goods and hosiery. Lectures describing the various processes are given, and the necessary calculations are taught in connection with this course. Scouring and bleaching are also taught. The student is required to make use of knowledge acquired in the previous courses in dyeing.

230. Cotton Manufacture

Cotton Manufacture is the name assigned to a course of lectures given to the second year students in chemistry, so that they may become acquainted with the methods employed in the manufacture of cotton yarn and cloth. The various machines are thoroughly described and the methods of using them discussed in the lecture room. Because of the limited amount of time allowed for this subject the students are not taught to operate the machines, but are given an opportunity to examine them at rest, and later to observe them in operation.

233. Textile Chemistry I

This subject comprises a study of the properties and analysis of soap, mordants and other chemicals used in the textile industries. One lecture of forty-five minutes' duration is given each week, and frequent conferences are held with the student in the laboratory. The student is required constantly to consult standard books of reference in connection with his laboratory work. While the limited time devoted to this course does not give enough time for the student to make many complete analyses, it does illustrate to him the application of the knowledge acquired in the previous subjects of qualitative and quantitative analysis and organic chemistry.

234. Textile Chemistry II

This subject deals with coal, oil, soap, water, starches, sizing and softening compounds and textile fabrics. The commercial methods of obtaining the above substances, their usual composition and application, is discussed in lectures. The laboratory work consists of the analysis of typical compounds, obtained from the consumers when possible. The detection of the various starches and fibers by the microscope is taught, and their separation and estimation by chemical methods. Sizing and loading of fabrics is also discussed. This course is very practical in its application, and *accurate* work is required.

235. Finishing of Cotton Fabrics

The object of this course is to give to the designer a knowledge of the various methods used in finishing, and the effect of the same on the appearance and construction of the fabric. Simple methods of distinguishing between different fibers and finishes filled and pure starched cloths, are taught. The instruction is given by means of one lecture a week and two hours' laboratory practice.

240. Singeing

Construction of machine. Function of air pump. Adjustment of gas. Speed of operation. Singeing for a face finish. Singeing for a body finish. Determination of best conditions for a particular cloth.

241. Scouring

Construction of kiers. Methods of circulation. Packing of goods. Time of boiling. Washing down. Use and operation of washing machines. Choice of scouring agent.

242. Bleaching

Construction of chemic vats and cisterns. Application of bleaching solution to the goods. Squeezers. Piling down. Precautions to prevent tendering action of bleaching agent. Washing. Use of "Antichlors." Openers and scutchers. Selection of bleaching agent.

245. Mercerizing

Construction of mercerizing machine. Design of tenter clips. Proper tension in tenter frame. Removal of caustic by washing. Neutralization of last traces. Variation in conditions to suit cloth treated.

250. Drying

Preparation of goods for drying. Importance of proper mangling. Construction and operation of a mangle. Construction of the drying cylinders. Mechanical limits of speed of operation. Best speed in view of results obtained on goods. Static electricity and its grounding.

Construction and use of tenter frames. Methods of heating, direct and indirect. Direction of air currents in relation to that of the cloth. Conditions giving the most rapid drying; the best width. Choice of tenter clip for a specific purpose.

255. Calendering

Types of calenders and various finishes obtained. Construction of a simple calender, friction calender, chasing calender, Schreiner and embossing calenders. Speeds and conditions governing the operation of the above machines. Use of scrimp bars and stretchers. Gas and steam heating. Metallic rolls, fibrous rolls, and finishes produced by them. Care of rolls. Use of water. So-called permanent calender finishes. Use of beetles and hot presses for preparation for calendering. Top finishing.

260. Putting up

Inspection of goods for faults. Classing as firsts, seconds, thirds and remnants. Yarding by flat folding, by rolling machines. Construction and operation of these machines. Various folds and put-up required by the several trades. Ticketing, banding and papering. Assortment in cases and storage of goods.

269. Thesis

Each student who is to graduate from the course in chemistry and dyeing must devote twelve hours per week during the last half of his third year to original work, and at least one week before graduation must submit to the principal of the department a thesis of not less than two thousand words based upon the results of his own investigations.

271. Elementary Knitting

A study of the various types of winding machines used for cotton, wool and worsted yarns preparatory to running on the ribbers and hosiery machines.

Principles of latch and spring needle knitting and a study of the various types of machines used for making rib tops.

Construction study of the automatic hosiery machines used on coarse gauge work including men's, ladies' and children's hose.

272. Advanced Knitting

Winding and the preparation of cotton, worsted, rayon and silk yarns used in knitting.

A study of the medium and fine gauge ribbers with draw-string, French welt and yarn changing attachments.

Construction and adjustments used on medium and fine gauge full automatic hosiery machines for making plain and fancy pattern hosiery.

273. Hosiery Finishing

Fundamental principles and a study of the various types of loopers. 'Rough inspecting and the handling of work preparatory to going to the dyeing department.

A study of the sewing machines used in finishing hosiery, including hemming, mock seam, cloc work, etc.

Cloth analysis and testing of knitting yarns and fabrics.

274. Hosiery Manufacture

Mending, drying and pressing. Inspecting, pairing, stamping, folding, banding and boxing.

Scientific management and the handling of goods and records throughout the mill and office.

Cost control and a study of its application to the modern hosiery mill.

281. Elementary Knitting

A study of the various types of winding machines used for cotton, worsted, merino, rayon and silk yarns used in the manufacture of underwear.

Principles of latch and spring needle knitting and a study of the various types of machines used in making cuffs, sleeves and body cloth.

282. Underwear Cutting

A study of pattern making and handling of cloth in the cutting department for making a line of men's, ladies', children's and infants' underwear.

283. Underwear Finishing

A study of the various finishes used on underwear.

Setting up, adjusting and a study of the various types and makes of sewing machines used in the manufacture of underwear.

Cloth analysis and testing of knitting yarns and fabrics.

284. Underwear Manufacturing

Mending, inspecting, pressing, folding, banding and boxing of the finished garment.

Scientific management and the handling of goods and records throughout the mill and office.

Cost control and a study of its application to the modern underwear mill.

293. Miscellaneous Knitting

Knitting fine French balbriggan cloth, worsted and merino cloth, single and double plush cloth, for fleeced-lined underwear, made on spring needle frame.

Sweater knitting, with racked rib and cuffs, pineapple stitch and fancy-colored effects, on circular rib machines.

Full-fashion sweater knitting on the Lamb full-fashion, hand power machine.

Knitting gloves on the Lamb hand-power machine.

Different processes of finishing balbriggan, worsted, merino and fleeced cloth into underwear ready for market.

294. Knitting

The aim of this work is to give to the student an insight into the class of work for which a large part of the yarn in a yarn mill is made.

The different types of knitting machines are studied, and in each case the effect upon the machine and fabric of imperfect yarn is gone into carefully.

295. Testing

This course is a study of the methods used in the testing of cotton yarns and fabrics throughout the mill. It includes atmospheric conditions and their effect on testing, determining moisture regain, tensile strength, twist, evenness, cleanliness, cloth analysis and identification of textile fibres.

300. Picking, Carding and Roving

Cotton yarn mill machinery. Machines required for making different numbers of counts of yarn.

Picking Room.—Bale breakers or openers, their use and how operated.

Automatic feeders, their construction, methods of setting and adjusting; evener motions, calculations.

Openers, their use and object. The different kinds used and the class of cotton for which they are best adapted. The different kinds of beaters used, and the speeds at which they should run.

Cleaning trunks, their uses and operation.

Breaker, intermediate and finisher lappers. Different styles and makes of machines. The construction and operation of the different parts, setting and adjusting the different parts, and arranging the speeds to give the best results. Calculations for speeds, drafts, weights and production on the different machines.

Cards.—The different kinds of cards used; their construction and operation.

The revolving flat card. Its principal parts. Different methods of setting, different settings for different classes of work. The speeds of the different parts, and their effect on the quality of the work produced. Construction of card clothing. Clothing cylinder doffer and top flats. Stripping and grinding cards. Grinding and testing top flats. Covering grinding rolls. Splicing driving ropes and belts.

Calculations for speeds, drafts, production, per cent of waste, etc.

Roving Frames.—The different processes used. The construction and use of the roving or fly frame.

Speeds of the different size frames and the different parts of the frame.

The different styles of differentials used and their object.

Cone drums. The effect of the shape of the cones on the running of the frames. Levelling and adjusting roving frames. Balancing flyers, and the effect of unbalanced flyers on the running of the frame.

The effect of draft and twist on the quality and quantity of the work produced.

Roller setting. Calculations for speeds, drafts, twist, tension and lay Calculations for differentials, cone drums and productions.

301. Special Knitting

Operations preliminary to knitting. Winding, cone winding, bobbin winding. Development of knitting. Knitting needles. Construction and operation of latch and spring needles. Knitting on circular and flat machines. Study of the results of uneven, mixed and otherwise imperfect yarns in the knitting process, and the effect upon the machine and fabric.

302. Drawing Rolls and Drawing Frames. Ring Spinning. Doubling and Drafting

Drawing Rolls.—The different kinds of rolls used, their construction, methods of covering, setting and adjusting for different kinds of work. Clearers for drawing rolls.

Drawing Frames.—The railway head and evener draw frame. The construction and arrangement of drawing frames. Different methods of gearing, weighting and stop-motions for draw frames. Calculations for speeds, drafts, dividing drafts, production, etc.

The Ring Spinning Frame.—Its construction and use. The construction and adjustment of the different parts, such as spindles, rings, travelers, rollers, builder motions, etc. Making bands. Comparing different drives for spindles. Twist in yarn, its effect on strength and production. Calculations for speeds, drafts, twist and production.

Doubling and Drafting.—Laying out drafts and weights at the different machines from picker to spinning frame for making different numbers of yarn.

Calculating the number of machines required at the different processes to produce a required amount of yarn of different numbers.

Calculating the labor cost of making roving or yarn, using different methods.

Calculating the effect of draft at the different machines on the production and cost of the yarn made.

303. Combing and Mule Spinning

Sliver and ribbon lap machines. Construction of the different machines. Methods of setting and operating same.

Combers.—The different kinds of combers used; their speeds and productions. Comber setting and adjusting and methods of operating.

Roll Varnishing. The percentage scale and its use. Practice work in setting and operating the different combers.

Calculations for speeds, drafts, productions, etc., on the lap machines and combers.

Mules.—The spinning mule and its uses. The special features of the mule. Description of the construction and operation of the different parts of the mule. Calculations for speeds, drafts, etc., and all calculations required in making changes.

Practice work in laying out and carrying through the work for making different counts of yarn from the raw stock to the finished thread.

304. Twisting and Cotton Classing

The Object of Twisting.—Different styles of twisters used. Wet and dry twisting. Direction of twist. Effect of twist on the strength, weight or counts.

Preparing yarn for twisting.

Making ply threads, cords, cordonnet and sewing threads.

Sizes of rings and spindle speeds for different threads. Calculations for speeds, twists and productions.

Cotton Classing.—Different species of cotton plants.

Cultivation of cotton. The different varieties of cotton and the class of goods for which they are best adapted.

Cotton picking, ginning, baling and marketing. The selection of cotton for different classes of goods.

Cotton grading and stapling.

Practice work in running work from raw stock to spinning and twisting.

305. Test Work and Roller Covering

Test Work.—Testing different classes of cotton and comparing results for waste removed and strength of yarn made. Testing different methods of handling cotton, using different speeds; drafts and numbers of processes used and comparing results.

Roller Covering.—Covering top roll and under clearers.

Cutting, piecing, drawing on, burning down and burnishing.

306. Yarn Testing and Comber Reneedling

Yarn Testing.—Testing yarns for weight or counts, breaking weight (skein or single). Inspecting yarn, testing for moisture, amount of twist in single or ply yarn. Testing for contraction in single yarn; for contraction or expansion in ply threads. Testing for elasticity.

Comber Reneedling.—Cleaning off, setting needles, soldering on, building half laps, polishing and finishing same.

Practical work in running tests through the machines.

TEXTBOOKS AND LECTURE SHEETS USED IN THE SCHOOL

Chemistry Department

Smith's "Elementary Chemistry," Noyes' "Qualitative Analysis," Talbot's "Quantitative Analysis," Remsen & Orndorff's "Organic Chemistry," Blanchard's "Synthetic Inorganic Chemistry," Smith's "College Chemistry."

Mechanical Department

"Practical Mechanics," Hale; W. H. Timbie's "Essentials of Electricity."
"Industrial Mathematics," Farnsworth.

Other Departments

No textbooks are used in the departments other than those named above. Lectures are prepared by the heads of the departments covering the work in detail, multigraphed, and sold to the students at cost. These, with design books, design pads, color supplies and notebooks, constitute the working material to be provided by students.

EVENING CLASSES

Evening instruction, similar to the day, on the same machinery and by the heads of the day departments assisted by practical skilled men from the mills, is given for the benefit of workers in local mills and machine shops. The instruction in the evening classes is divided into sections so as to give the greatest possible facilities to the students in these classes.

Certificates are granted to all students in the evening classes who have successfully completed the equivalent to two years' work, two evenings a week. The certificate states the subjects that the student has passed in, and the length of time he has devoted to the work.

Evening students are enrolled at the commencement of both the fall and spring terms. The subjects taken up in the different evening courses follow the detailed topics as specified on pages 26 and 27.

Students enrolling in the regular Chemistry and Dyeing Course are required to make a deposit of $5 for brbeakage. In case the breakage causd by any student does not equal the amount of his deposit, the balance is returned to him at the end of the school year, but if the actual breakage exceeds this amount, an additional charge is made.

The school is in session four evenings a week for twenty-four weeks,—Monday, Tuesday, Thursday and Friday, from 7.30 to 9.15 for all classes except those taking the Chemistry and Dyeing Course. Those classes are held three nights a week,—Monday and Tuesday, from 7 to 9.30 and Thursday, from 7.15 to 9.15.

For terms of admission, see pages 28 and 29 of this catalogue.

COURSES OF INSTRUCTION, EVENING CLASSES

Carding and Spinning Department

Picking, Carding and Drawing: one year, two evenings a week.
Combing: one term, two evenings a week.
Roving Frames: one term, two evenings a week.
Ring Spinning and Twisting: one term, two evenings a week.
Mule Spinning: one year, two evenings a week.
Cotton Classing: one term, one evening a week.
Advanced Calculations in Carding and Spinning: one year, one evening a week.
Mill calculations: one term, two evenings a week.

Weaving and Warp Preparation Departments

Spooling, Warping and Slashing: one term, two evenings a week.
Automatic Loom Fixing: one term, two evenings a week.
Plain Loom Fixing: one term, two evenings a week.
Fancy Loom Fixing: one term, two evenings a week.
Jacquard Loom Fixing: one term, two evenings a week.
French, Portuguese and Polish Classes in Loom Fixing.
Advanced Calculations in Weaving: one term, two evenings a week.
Warp Drawing for Women: one term, two evenings a week.

Designing Department

Elementary Designing: one term, two evenings a week.
Advanced Designing: one term, two evenings a week.

Elementary Analysis: one term, two evenings a week.
Advanced Analysis: one term, two evenings a week.
Jacquard Designing: one term, two evenings a week.

Knitting Department

Special Knitting: two evenings a week each term.

Rayon Department

Chemistry of Cellulose.—Preparation of Basis Materials. Various processes of manufacture. Dyeing and finishing.
Physical Properties.
Rayon Processing.—Winding. Weaving. Knitting. One term, one evening a week.
Inspecting.—Grading of Skein Rayon: one term, two evenings a week.

Engineering Department

Mechanical Drawing: one year, two evenings a week.
Advanced Drawing: one year, two evenings a week.
Machine Drawing: one year, two evenings a week.
Mechanical Designing: one year, two evenings a week.
Machine-shop Practice: one year, two evenings a week.
Advanced Shop Work: one year, two evenings a week.
Steam Engineering, Boilers: one term, one evening a week.
Steam Engineering, Engines: one term, one evening a week.
Elementary Electricity: one year, one evening a week.

Chemistry Department

General Chemistry: one year, two evenings a week.
Qualitative Analysis: one year, two evenings a week.
Quantitative Analysis: one year, two evenings a week.
Organic Chemistry: one year, two evenings a week.
Textile Chemistry I: one year, two evenings a week.
Textile Chemistry II: one year, two evenings a week.
Dyeing I: one year, two evenings a week.
Dyeing II: one year, two evenings a week.
Dyeing III: one year, two evenings a week.

Mathematics

Cost Finding: one term, two evenings a week.

Evening Diploma Courses

The school diploma will be granted to those students of the evening classes who successfully complete the work specified under the following courses:—

I. Carding and Spinning.—Picking, Carding and Drawing, Roving Frames, Combing, Ring Spinning and Twisting, Mule Spinning, Cotton Sampling, Advanced Calculations in Carding and Spinning, Mechanical Drawing, Advanced Drawing.

II. Weaving and Designing.—Spooling, Warping and Slashing, Plain Weaving and Fixing, Fancy Weaving and Fixing, Elementary Designing and Cloth Construction, Advanced Designing and Cloth Construction, Jacquard Designing, Cotton Sampling, Mechanical Drawing, Advanced Drawing, Cost Finding.

III. Chemistry and Dyeing.—General Chemistry, Qualitative Analysis, Quantitative Analysis, Organic Chemistry, Textile Chemistry I, Textile Chemistry II, Dyeing I, Dyeing II, Dyeing III, Mechanical Drawing, Advanced Drawing.

Courses for Women

Several courses are open for women in both the day and evening classes and a number have pursued them successfully. They are as follows:—

Textile Designing.
Chemistry and Dyeing.
Cost Finding.
Cotton Sampling.
Warp Drawing.
Rayon Inspecting.

GENERAL INFORMATION

CONDITIONS OF ADMISSION TO DAY CLASSES

Candidates for admission to the regular day courses must be at least sixteen years of age. Those who have been students of other technical institutions, colleges or universities are required to furnish a certificate of honorable dismissal from those institutions. Candidates having a graduate's certificate from a high school or other educational institution of equal standing are admitted without examination. Other applicants for admission are required to undergo examinations in arithmetic, English, and commercial geography.

Candidates for the Junior Course should be fourteen years of age and have been graduated from grammar school.

A candidate, whether desiring to be enrolled on certificate or by passing the entrance examination, must fill out an application blank, which should be delivered at the school as early as possible before the opening of the year.

Applicants desiring to take up special studies in the school may be admitted provided their applications are approved by the Principal. Such students shall be known as specials, and, upon satisfactory completion of their work in the school, shall be given certificates stating the work they have covered and the time they have been in attendance.

No applicant is admitted to the regular courses of the school after the first four weeks unless he has already covered the work of the school for the time preceding the date of his application; nor shall any change in any student's course be made after the first four weeks of admission except by permission of the Principal.

ENTRANCE EXAMINATION FOR DAY STUDENTS

The examinations for those desiring to enter the school at the opening of the fall term of 1930 will be held at the school only, on Wednesday, June 4 and on Friday, September 5 at 9 A.M.

The detailed topics dealt with in the entrance examinations are as follows:—

Arithmetic

Definitions, addition, subtraction, multiplication, division, factors, multiples, cancellation, fractions, decimals, percentage, interest, ratio and proportion, square root, compound quantities, mensuration, metric system.

English

The candidate will be required to show his ability to spell, capitalize and punctuate correctly; to show a practical knowledge of the essentials of English grammar, a good training in the construction of the sentence, and familiarity with the simple principles of paragraph division and structure.

He will be required to write a business letter, and one or more short articles on subjects assigned from which he may select. Ability to express himself clearly and accurately will be considered of prime importance.

Commercial Geography

Farm products of the United States, where raised; our mines, and where located; our manufactures, and where established; our exports, and to what countries; our imports and from what countries; our transportation facilities.

CONDITIONS OF ADMISSION TO EVENING CLASSES

Candidates for admission to evening classes must be at least *fourteen* years of age.

Those desiring to enter any of the courses in the various departments must satisfy the head of the department which they desire to enter that they have sufficient knowledge to be benefited by the instruction offered.

FEES

Day Students.—No tuition fee is charged day students who are residents of Massachusetts. For non-resident students the fee is $150 a year, and for students from foreign countries $300 a year, payable in advance in two equal installments,—at the opening of the fall term and at the end of the first semester. No student

shall be admitted to the classes until his tuition is paid. No fees are refunded except by special action of the Board of Trustees.

The above fee includes admission to any of the evening classes in which there is accommodation, and which the day students may desire to attend.

A deposit of $10 is required of all day students taking the regular Chemistry and Dyeing Course. A deposit of $5 is required of students taking chemistry in connection with any other course. A deposit of $2.50 is required of students taking converting. These deposits are to cover the cost of any breakage that may occur, but in case the actual breakage exceeds this amount an additional charge is made. Any unexpended balance is returned at the end of the year. To non-resident and foreign students a further charge of $10 for chemicals is made.

Students are required to supply themselves with such books, tools and materials as are recommended by the school, and pay for any breakage or damage that they may cause in addition to the above-named fee. A fee of $3 is charged each day student, except first year Juniors, to be used for assisting in the maintenance of athletics in the school.

All fees are due at the beginning of each school year.

Evening Students.—No tuition fee is charged evening students. Students enrolled in the Chemistry and Dyeing Course are required to make a deposit of $5 for breakage. In case the breakage caused by any student does not equal the amount of his deposit, the balance is returned to him at the close of the school year, but if the breakage is in excess of this deposit, the student is charged the additional amount. Evening students are required to supply themselves with such books and materials as are recommended by the school, but this charge is small.

SCHOOL HOURS

The school hours for the day classes are from 8.30 to 12 each morning except Saturdays, with afternoon sessions from 1.30 to 4.30 except Saturdays. For sessions of evening classes see page 26.

EXAMINATIONS, CERTIFICATES AND DIPLOMAS

Written examinations are held twice a year, and other tests from time to time to determine the standing of students in their work.

The final examination is held at the end of the spring term. Results of these examinations, together with the student's marks recorded from recitations, practical demonstrations and student's books are taken into account in ranking students at the end of each year and for graduation. Unsatisfactory progress necessitates the student repeating his studies.

Diplomas are given on the satisfactory completion of a course of study extending over a period of three years in connection with each course, if the student's record is otherwise satisfactory.

Students taking special courses in most cases, are entitled to a certificate if they honorably and satisfactorily complete the course of instruction scheduled.

Day students are required to spend as much time daily out of school hours in study, such as recording lectures and other notes, as may be necessary to maintain proper standing. The students' books are examined by the instructors periodically, and the care and accuracy with which they are kept is considered in ranking students.

CONDUCT

Students are required to conduct themselves in an orderly and gentlemanly manner while in attendance at the school. When the conduct of any student is considered by the Principal of the school detrimental to its best interests, he will be suspended by him and the case reported to the Board of Trustees for action.

Any student who presents at any time work as his own which he has not performed, or tries to pass an examination by dishonorable means, shall be regarded as having committed a serious offence.

Students shall exercise due care in the use of the school apparatus and machinery. All breakages and accidents must be reported at once to the instructor in charge and the student will be held liable for any wilful damage or the result of gross carelessness.

ATTENDANCE

Day students taking the regular courses are required to attend every exercise of the school; special students, every exercise called for by their schedules. For every case of absence or tardiness students must present an excuse to the Principal. A certain number of unsatisfactory excuses will render the student liable to suspension and further action if cause is sufficient.

When the attendance of an evening student is unsatisfactory he will render himself liable to be dropped from the school.

BOARD AND ROOMS

New Bedford is unusually desirable as a residential city, and students will find numerous houses of private families and boarding houses where they may obtain room and board.

No requirements are made as to residence of out-of-town students, although facilities are given by having addresses of suitable houses on file at the school.

No definite estimate can be made of the cost, as this depends entirely on the tastes of the student, but board and room may be obtained for from $12 per week upwards.

TOOLS AND MATERIALS

Students are required to purchase such materials, textbooks, tools and apparatus as may be required from time to time by the school authorities, or make deposits on such as are loaned to them. The supplies required vary with the courses for which the students enter, the cost being from $20 to $40 per year.

LIBRARY

The school maintains a library that contains all the best works on carding and spinning, weaving, designing, knitting, dyeing and mechanics; also a consulting encyclopedia and an international dictionary. Catalogues and pamphlets dealing with machinery or processes related to textile work are also on file, as are all the leading textile journals and trade papers. The students have access to the library during school hours.

ATHLETICS

The school has an athletic association, and the students participate actively in various sports and games. The school is equipped with a gymnasium, locker room and shower baths. There are several athletic fields open to the students for their outdoor sports. The management of the school will give all reasonable encouragement and support to the furtherance of healthful recreation and manly sports for its students.

For fee for same see page 29 of this catalogue.

THE WILLIAM FIRTH SCHOLARSHIP AT THE NEW BEDFORD TEXTILE SCHOOL

The donation of William Firth, Esq., has established a scholarship at the New Bedford Textile School, primarily for the benefit of a son of a member or of a deceased member of the National Association of Cotton Manufacturers, furnishing to the recipient of such scholarship $180 a year for the course. Candidates for this scholarship must apply by letter only, addressed to the National Association of Cotton Manufacturers, P. O. Box 3672, Boston, Mass. The candidates must be at least sixteen years of age and furnish certificates of good moral character, and those who have been students of other technical institutions, colleges or other universities are required to furnish certificates of honorable dismissal from such institutions. Those applicants conforming to the above conditions are nominated by the Board of Government to the New Bedford Textile School, and the selection of the candidate for the scholarship is made as the result of an examination held at New Bedford, Mass. Every candidate, previous to the examination, must file an application at the school for admission, agreeing to observe the rules and regulations of the school. Candidates are eligible for any of the courses included in the curriculum of the school.

In case the son of a member or of a deceased member of the National Association of Cotton Manufacturers does not apply for the scholarship, any person eligible for entrance to the school may make application.

This scholarship will be available in the fall of 1931.

THE MANNING EMERY, Jr., SCHOLARSHIP AT THE NEW BEDFORD TEXTILE SCHOOL

The donation by the Passaic Cotton Mills Corporation and its employees of the sum of $3,000 has established a scholarship at the New Bedford Textile School, primarily for the benefit of the employees of the Passaic Cotton Mills Corporation and in accordance with an indenture entered into between the above-named Passaic Cotton Mills Corporation and its employees and the Trustees of the New Bedford Textile School.

In default of any application from an employee of the Passaic Cotton Mills Corporation who is deemed by the Trustees of the New Bedford Textile School as qualified to enter that institution, the Trustees of the New Bedford Textile School may, at their discretion, nominate, with the approval of the Passaic Cotton Mills Corporation, some other person to be the beneficiary of this scholarship. Such applicants must comply with such reasonable regulations and conditions as said New Bedford Textile School may from time to time adopt in relation thereto.

From said applicants one shall be selected by the Trustees of the New Bedford Textile School as a beneficiary of said scholarship.

This scholarship will be available in the fall of 1930.

THE MASSACHUSETTS CHARITABLE MECHANIC ASSOCIATION SCHOLARSHIP

The Massachusetts Charitable Mechanic Association is giving four scholarships each, $250 a year, to this school to be given to four deserving students to assist them in obtaining a technical education. It is understood that the persons securing these scholarships must prove themselves worthy in order to retain them.

THE NATIONAL ASSOCIATION OF COTTON MANUFACTURERS MEDAL

The National Association of Cotton Manufacturers offers a medal to be awarded each year to the student in the graduating class who shows the greatest proficiency in scholarship. This is determined by an examination of the records of the students' progress throughout their studies, which are recorded and reported upon by the instructors and kept permanently on file.

The competition for this medal is open to all day students who graduate in the Complete Cotton Manufacturing Course, or to evening students who have completed studies comprised in that course and graduated therein. The association offering the medal has made it a condition of the award that at least four members of the graduating class be eligible to the competition.

THE WILLIAM E. HATCH MEDAL

This medal is awarded to the member of the freshman class, taking the General Cotton Manufacturing Course, who ranks the highest in scholarship for the year. It is presented by the Alumni Association, to commemorate the day of Mr. William E. Hatch's retirement from the presidency of the school.

THE PETER SLATER MEDAL

This medal is presented by Mr. Victor O. B. Slater, a graduate of the evening classes of the school, in memory of his father, Peter Slater, who was a loyal friend of the school. It is awarded to the student, graduating from the evening classes in Textile Design, who has attained the highest standing for the two-year course.

EQUIPMENT

COTTON CARDING AND SPINNING DEPARTMENT

This department occupies nearly the entire first floor of the machinery building, and has approximately 9,000 square feet of floor surface. The equipment is large

and diversified, enabling the students to become acquainted with practically all the leading makes of machines found in the carding or spinning departments of cotton mills.

A special feature of the equipment is the large number of models of the principal parts of the different machines in this department. These models are so mounted that the different settings and adjustments can be made equally as well as on the machine itself, and thus enable the student to grasp more readily the essential points, since the parts are much more readily accessible.

The department is humidified by the system of the American Moistening Company, Bahnson humidifiers, the Parks-Cramer Company's Turbo System and the American Air Purifying Company's portable humidifiers, automatic control.

Carver Cotton Gin Co.: 1 18 saw cotton gin.

Saco-Lowell Shops: 1 roving waste machine; 1 automatic feeder; 1 opener and breaker lapper; 1 finisher lapper; 1 card; 1 evener draw frame; 1 two-head draw frame; 1 fine roving frame; 2 spinning frames; 1 Perham & Davis evener motion complete with feed rolls and cones.

H. & B. American Machine Co.: 1 finisher lapper; 2 cards; 1 drawing frame; 2 roving frames; 2 spinning frames; 1 section of arch with bend; 1 spinning builder motion; 1 roving builder motion; 2 differentials.

Mason Machine Works: 1 card; 1 railway head.

John Hetherington & Sons, Ltd.: 1 card; 1 sliver lap machine; 2 combers; 1 mule; 1 camless winder; 1 nipper model.

Potter & Johnston: 1 card.

Whitin Machine Works: 2 cards; 1 sliver lap machine; 1 ribbon lap machine; 3 combers; 1 drawing frame; 2 roving frames; 2 spinning frames; 1 model spinning builder.

Woonsocket Machine & Press Co.: 1 card; 2 drawing frames; 2 roving frames; 1 differential; 1 roving builder motion; 1 gassing machine; 1 combination bale breaker, Crighton opener and horizontal cleaner.

Dobson & Barlow: 1 fine roving frame; 1 roller and clearer card; 1 mule.

Asa Lees: 1 roving differential motion.

Fales & Jenks Machine Co.: 3 spinning frames; 1 twister.

Draper Corporation: 2 twisters; 1 banding machine.

Collins Brothers: 1 twister.

Universal Winding Company: 4 winders.

Foster Machine Co.: 2 doubling winders.

Miscellaneous Equipment: Roller covering machinery; apparatus for comber re-needling; card clothing machine; ball and spool winding machines.

Testing Apparatus: 3 single thread testers; skein and cloth tester; conditioning and testing machine; inspecting machine; yarn and roving reels; yarn balances; percentage scale; micro-photographic machine; twist counters; thread splicers, electric oven recording thermometer, recording hygrothermograph and rotostat; 1 fibre tester.

WEAVING AND WARP PREPARATION DEPARTMENT

This department occupies all of the second floor of the machinery building and contains about 15,000 square feet of floor area. The equipment is very complete and includes sufficient machinery to enable each student to obtain all the practical experience required in connection with his studies. All of the latest machinery is represented in this equipment, and, as the machinery is made especially for use in the school, it fully meets the needs of the students. Besides the machinery listed below there are models for demonstrating leno motions, box motions, warp-stop motions, etc.

Draper Corporation: 4 automatic looms, plain, 2-harness; 1 automatic 5-harness cam loom; 1 automatic 20-harness dobby loom; 1 spooler; 2 warpers.

Crompton & Knowles Loom Works: 5 plain 3-harness, 4 plain 4-harness, 5 plain 5-harness looms; 1 6 x 1 gingham loom; 1 2 x 1 automatic bobbin changing gingham loom; 1 4 x 1 gingham loom; 1 3 x 1 12-harness towel loom; 1 4 x 1 20-harness No. 13 multiplier loom; 1 20-harness double cylinder loom; 2 20-harness dobby looms; 2 2-bar lappet looms; 3 25-harness 2 x 1 box and leno motion looms; 8 16-harness 2 x 1 box and leno motion looms; 3 25-harness

Designing Department, showing Design Classroom

leno motion looms; 10 20-harness leno motion looms; 1 rise and drop Jacquard, 200 hook loom; 1 double-lift Jacquard, 208 hook loom; 1 double-lift Jacquard, 300 hook loom; 1 double-lift Jacquard, 400 hook loom; 2 4 x 1 20-harness leno motion looms; 2 4 x 1 20-harness dobby double cylinder automatic bobbin changing looms; 2 4 x 4 20-harness dobby looms; 2 25-Harness Cotton King 4 x 1 Automatic and leno motion looms.

Whitin Machine Works: 2 plain, 3-harness looms; 2 plain, 4-harness looms; 9 plain, 5-harness looms; 1 25-harness 2 x 1 box motion loom; 1 25-harness 2 x 1 box motion and leno motion loom; 3 25-harness leno motion looms; 1 20-harness leno motion loom.

Stafford Co.: 1 20-harness automatic shuttle changing loom; 1 25-harness dobby loom; 1 plain automatic shuttle changing loom.

Hopedale Mfg. Co.: 1 Nordray plain, 2-harness, automatic loom.

Easton & Burnham Machine Co.: 1 spooler.

T. C. Entwistle Co.: 1 warper; 1 ball warper; 1 beamer.

Howard & Bullough Machine Co.: 1 slasher.

22 drawing-in frames.

DESIGNING DEPARTMENT

The design classroom is located on the third floor of the recitation building, and is a large, well-lighted room containing all the appliances necessary for instruction in this important subject. Special attention has been given to the method of lighting this room to give the best results, and the desks are made with special reference to the needs of the student of designing.

The hand loom work is located in a large room on the third floor of the machinery building. This room contains twenty-seven hand looms adapted to the use of students in experimental work, and in putting into practice the theory of designing, and also to enable them to produce certain of the designs that they are taught in the designing class. There is also a 20 spindle bobbin winder and one hand winder. The room is well lighted by a saw tooth roof.

The card cutting room contains two Royle card cutting machines and a card lacing frame, thus enabling the students working Jacquard designs to cut their own cards.

MECHANICAL DEPARTMENT

Instruction in the mechanical department is carried on in five different rooms located in various parts of the recitation building. These rooms are arranged and fitted out with apparatus to meet the needs of the students following this course. The department is subdivided into the following sections: mechanical drawing, textile engineering and machine-shop work.

Mechanical Drawing.—The drafting room is located on the second floor of the recitation building and is well lighted by northern and western exposures. It is equipped with independent drawing tables and lockers for the drawing boards and materials. For the student's use in connection with their drafting instruction there is a collection of models, mechanical apparatus and machine parts. On the third floor there is a swinging blue print frame mounted on a track, and a large dark room fitted with a Wagenhorst Electric Blue Printer and modern conveniences for blue printing.

Steam Engineering and Elementary Electricity.—Instruction in steam engineering and elementary electricity is given both in theory and practice. The theoretical part of the course is carried on in a large recitation room on the second floor, while the practical side is studied in the engineering laboratory in the basement of the recitation building. The laboratory is supplied with steam direct from the boiler room and also has gas and water connections. 1 12″ x 24″ Wetherell Corliss Engine; one 5-horsepower Sturtevant Vertical Steam Engine, and models of boilers, engines and pumps.

For the study of electricity there is provided a source of alternating current at 110 volts and 220 volts pressure.

1 2KW Holtzer-Cabot direct current Generator; 1 5-horsepower Holtzer-Cabot Induction Motor; 1 2½ KW Holtzer-Cabot compound wound Converter; an assortment of voltmeters, ammeters, wattmeters, galvanometer, foot candle meter, transformers, etc.

Machine Shop.—This department occupies about 2,800 square feet of floor surface on the first floor of the recitation building. The machinery is electrically driven and the equipment modern.

7 12″ x 5 ft. Reed Prentice engine lathes; 3 12″ x 6 ft. Reed Prentice engine lathes; 1 18″ x 8 ft. Reed Prentice Engine lathe; 1 14″ x 6 ft. Reed Prentice quick change gear engine lathe; 1 14″ x 6 ft. Whitcomb-Blaisdell quick change gear engine lathe; 1 14″ x 6 ft. Hendey quick change gear engine lathe; 2 14″ x 6 ft. Flather engine lathes; 1 7″ x 5 ft. Reed Prentice speed lathe; 1 10″ x 5 ft. speed lathe; 1 20″ Prentice drill; 2 Bench drills; 1 No. 4 Reed "Barr" single sensitive spindle drill; 1 No. 1½ Brown & Sharpe universal milling machine; 1 No. 2 Brown & Sharpe universal milling machine; 1 16″ Potter & Johnson universal shaper; 2 16″ Ohio shapers; 1 24″ x 6 ft. Woodward & Powell planer; 1 Morse plain grinder; 1 Greenfield universal grinder, complete; 1 2½″ x 20″ Diamond water tool grinder; 1 2″ x 12″ Builders bench grinder; 1 4″ x 28″ Douglas grindstone; 1 Millers Falls power hack saw; 1 Peerless electric tool post grinder; 1 Cincinnati electric hand drill; 1 Westmacott gas forge; 1 Wallace circular saw; 1 4″ Wallace planer; 1 Cabinet containing milling machine attachments, small tools and minor apparatus; 1 Brown & Sharpe No. 2 wire feed screw machine; 1 Oxweld welding equipment; 1 Black & Decker electric drill.

CHEMISTRY DYEING AND FINISHING DEPARTMENT

This department occupies about 13,600 square feet, situated in the basement and on the first and third floors of the recitation building. This space is divided into four laboratories, a lecture and recitation room, a reading room and office for the Principal of the department, and two store-rooms. The general chemistry and dyeing laboratory is a large, well-lighted room, 63 feet 6 inches by 20 feet, on the first floor, and is especially designed to meet the needs of the students in the general courses. This laboratory is equipped with forty-two double desks in rows of three desks each. At the end of each row is situated the sink and dye bath. Along the wall, on the opposite side are the hoods. In the main special laboratory each student has desk space, 2 feet by 8 feet, and his own desk, dye bath and draught hood. Conveniently located are a large drying oven, four 10-gallon dye kettles, and one 20-gallon dye kettle. This laboratory is equipped at each desk with gas, water and suction in order that the student's work may be carried on with the utmost celerity conducive to the best results. This laboratory is also equipped for analytical work and has 9 balances, a polariscope, 1 Spencer microscope No. 5, triple nose piece, objectives 16, 4, and 1.8 oil immersion, mechanical stage; 1 Spencer rotary microtome, 2 other microscopes, an Emerson calorimeter, a Westphal balance, a Saybolt universal viscosimeter, and other special apparatus. The laboratory for converting cotton textiles is located in the basement. It contains the machines necessary to demonstrate in practical proportions the operations involved, such as a single-burner Butterworth gas singer complete with air pump and spark extinguisher, a 100 lb. Jefferson kier, an experimental piece mercerizing machine, a 3 roll padding machine, a 6 cylinder horizontal drying machine, equipped with the Files exhausting system, 2 40″ jigs, a steam heated calender, and a 30 foot automatic tentering machine with Butterworth patent automatic clips. In this laboratory, there is also a small Hussong dyeing machine and a Franklin dyeing machine for yarn dyeing. On the Hussong machine there is a Tagliabue temperature controller. A high top cloth folder and a Dinsmore portable sewing machine are part of the equipment, although situated in another room. There is also one laboratory printing machine from the Textile-Finishing Machinery Company and one fade-ometer.

KNITTING DEPARTMENT

The knitting department occupies two large connecting rooms on the top floor of the machinery building, and contains about 6,600 square feet of floor area. The equipment is very complete, there being a greater number of machines and a larger variety than can be found in any similar school in the world. The work that has been produced by the students of this department has received high praise from some of the leading experts in the knitting trade, the hosiery and underwear taking especially high rank.

Crane Mfg. Co.: 1 36-gauge spring needle table, 18″ and 21″ cylinders; 1 15″ 8 cut rib body machine; 1 19″ 14 cut rib body machine with Crawford stop motion.

Hemphill Co.: 1 "Banner" 3¾″ 176 needle automatic footer; 1 "Banner" 3½″ 220 needle automatic footer; 1 "Banner" 3½″ 240 needle automatic striper; 1 "Banner" 3½″ 240 needle split footer.

Jenckes Knitting Machine Co.: 1 "Invincible" 4″ 108 needle automatic footer; 1 "Invincible" 3¾″ 188 needle automatic footer; 1 "Invincible" 3″ 120 needle automatic footer; 1 "Invincible" 3¾″ 240 needle automatic footer; 1 "Invincible" 3¾″ 176 needle automatic footer; 1 "Invincible" 3¾″ 160 needle automatic footer.

Fidelity Machine Co.: 1 3½″ 220 needle automatic ribber; 1 3½″ 240 needle automatic ribber; 1 3″ 180 needle automatic ribber.

H. Brinton Company: 1 3¾″ 108 and 188 needle automatic ribber; 1 4″ 84 and 160 needle automatic ribber; 1 3½″ 240 needle automatic ribber; 1 6″ 480 needle ribber; 1 4½″ 90 needle scarf machine.

Lamb Knitting Machine Co.: 1 6-cut scarf machine; 1 flat 8-cut glove machine.

Mayo Machine Co.: 1 3¾″ 176 needle automatic footer; 1 3½″ 188 needle automatic footer; 1 3½″ 200 needle automatic footer; 1 3½″ 220 needle automatic footer.

Scott & Williams: 1 3¾″ 176 and 200 needle automatic ribber; 1 3¾″ 176 and 180 needle automatic ribber; 1 4¼″ 180 needle automatic ribber; 1 4¼″ 216 needle automatic ribber; 1 4¼″ 276 needle automatic ribber; 1 4¼″ 300 needle automatic ribber; 1 3¼″ 160 needle automatic sleever; 1 3¾″ 264 needle automatic ribber; 1 10″ 8 and 10-cut automatic rib-body machine; 1 13″ 10-cut automatic rib-body machine; 1 20″ 12-cut plain and 2-2 body machine; 1 18″ 26-cut Balbriggan body machine; 1 20″ 16-cut Balbriggan body machine; 1 20″ 14-cut rib-cuff machine; 1 3½″ 240 needle Model K. machine; 1 3½″ 200 needle Model HH machine; 1 3¾″ 160 needle Model RI machine; 1 3¼″ 140 needle Model RI machine; 1 finishing machine; 1 bar-stitch machine; 1 chain machine; 1 12-point looper; 1 3½″ 280 needle Model K machine; 1 220 needle Model HH Spiral float machine.

Wildman Mfg. Co.: 1 3¾″ 200 needle fancy pattern automatic ribber; 1 2¾″ 120 needle necktie machine; 1 3½″ 188 and 200 needle automatic ribber; 1 3½″ 220 and 240 needle automatic ribber; 1 4½″ 180 needle automatic sleever; 1 4½″ 216 needle automatic ribber; 1 4¼″ 272 needle automatic ribber; 1 13″ 8 and 12-cut automatic rib-body machine; 1 18″ 14-cut plain and 2-2 rib-body machine; 1 Ballard electric cloth cutter.

Merrow Machine Co.: 1 60D overseaming machine; 1 60S hemming machine; 1 60AD overedging machine; 1 60UD cloc stitch machine; 1 35FJ schell machine; 1 60Q schell machine; 1 60JDC overseaming machine.

Metropolitan Sewing Machine Co.: 1 150CD lace neck machine; 1 50CH-10 taper collarette machine; 1 30TC seaming machine; 1 251 cover-seaming machine; 1 192BX facing machine; 1 28GC-1 stay machine; 1 192 W-5 elastic machine.

Singer Sewing Machine Co.: 1 44 lock stitch machine; 1 24 chain stitch machine; 1 24-8 drawer finishing machine; 1 32-29 eyelet machine; 1 68-7 button sewing machine; 1 79-6 button hole machine; 1 79-1 tacking machine.

Standard Sewing Machine Co.: 1 button hole machine.

Union Special Sewing Machine Co.: 1 class 3,000 lace machine; 1 class 5,800 collarette machine; 1 class 16,100 facing machine; 1 class 6,000 chain stitch machine; 1 class 2,300 chain stitch machine with Dewee's trimmer; 1 class 11,900 12-gauge cover seaming machine; 1 class 11,900 16-gauge cover seaming machine; 1 class 15,400 seaming machine; 1 grinder.

Wilcox & Gibbs Sewing Machine Co.: 1 lock-stitch machine; 1 flatlock machine; 3 over-lock machines; 1 feld-lock machine.

Stafford & Holt: 1 14″ 6-cut sweater machine.

Tompkins Bros. Co.: 1 spring needle table, 22 gauge 20″ and 36 gauge 18″.

United Shoe Machinery Co.: 1 metal eyelet machine.

The Beattie Mfg. Co.: 1 16-point looper; 1 22-point looper.

Grosser Knitting Machine Co.: 1 Koehler 20-point looper; 1 Koehler 24-point looper.

Southern Textile Machinery Co.: 1 Wright steady dial 22-point looper; 1 Wright steady dial 28-point looper.
John W. Hepworth & Co.: 1 16-point C. R. D. looper.
Saco-Lowell Shops: 1 24-end camless winder.
W. D. Huse & Sons: 2 bottle bobbin winders.
George W. Payne & Co.: 1 bottle bobbin winder.
Universal Winding Co.: 1 No. 50 cone winder; 1 No. 90 cone winder; 1 No. 60 winder.
Henry H. Skevington & Co.: 1 floating thread cutter.
Excelsior Cloth Dryer: 1 Excelsior cloth dryer.
Philadelphia Drying Machine Co.: 1 Hurricane steam press; 1 Hurricane hosiery and underwear dryer; 1 Electric hosiery dryer.
Lewis Jones: 1 hosiery and underwear brushing machine.
Paramount Hosiery Form Drying Co.: 1 set metal hosiery forms, men's, ladies' and children's.
Joseph T. Pearson: 120 hosiery boards, men's, ladies' and children's.
Stampagraph Co.: Dry transfers for hosiery.
Harding Brook Co.: 1 Acme Hosiery Binder.
Oswald Lever Co.: 1 18 end bobbin winder; 1 20 spindle quill winder.
Atwood Machine Co.: 1 16 end bobbin winder.
Kumagraph Co.: Dry transfers for hosiery.
Allentown Bobbin Works: 500 Silk Bobbins.

POWER, HEAT AND LIGHT PLANT

For some years the school manufactured its power and light, but owing to the growth of the school plant it became necessary either to make a large expenditure for a new power plant or to purchase power and light, and the latter plan was determined upon.

The equipment in this department consists of 1 Cahall 60 H.P. vertical boiler; 1 Stirling 105 H.P. water tubular boiler; 1 B. & W. 155 H.P. water tubular boiler; 1 Deane 4½″ x 2¾″ x 4″ duplex double outside packed plunger steam pump connected to a receiver tank; 1 Worthington 5¼″ x 3½″ x 5″ single steam pump; 1 Riley 100 H.P. feed water heater; 1 Atwood and Morrill damper regulator; 1 Sturtevant 75 H.P. horizontal center crank engine; 1 Westinghouse 50 K.W., 220 volt, 3 phase, alternating current generator, direct connected; 1 Westinghouse 4 K.W., 125 volt, direct current generator; 1 General Electric recording wattmeter; 1 W. S. Hill 4 panel switchboard equipped with 9 Wagner indicating ammeters, 2 Wagner indicating voltmeters, 1 Thomson 50 K.W. 3 phase integrating wattmeter, 2 direct reading K.W. meters, 14 Wagner current transformers, 1 Westinghouse combination rheostat, 1 General Electric combination rheostat, 2 Condit Electrical Manufacturing Company's 250 volt circuit breakers, all necessary switches, bus bars, etc.; 2 wing turbine fans for forced draft; 1 Cochrane oil separator; 1 Sturtevant heating and ventilating outfit; 1 American Moistening Co.'s humidifying outfit; also 1 Parks-Cramer Company's, 1 Bahnson Company's and 1 American Portable humidifying outfit; and 43 electric motors ranging from ⅛ H.P. to 15 H.P.

GRADUATION EXERCISES

PROGRAMME

March (Black Horse Troops) — *Sousa*
Olympia Studio Orchestra

Prayer — Rev. Henry J. Noon

Opening Address — Abbott P. Smith
President of the Board of Trustees

Address — Hon. William S. Youngman
Lieutenant Governor, Commonwealth of Massachusetts

Selection (Au Matin) — Olympia Studio Orchestra — *Godard*

Address and Presentation of The National Association of Cotton Manufacturers' Medal

LINCOLN BAYLIES
President, The National Association of Cotton Manufacturers

Presentation of the William E. Hatch and the Peter Slater Medals

GEORGE WALKER, *Trustee*

Selection (Spanish Dance) *Moskowski*

OLYMPIA STUDIO ORCHESTRA

Presentation of Diplomas and Certificates to Graduates of Day and Evening Classes

CHARLES F. PRIOR
Superintendent of Schools, Fairhaven, Mass.

Presentation of Class Picture *James H. Adams*

Remarks WILLIAM SMITH
Principal of the School

March (Salute to America) *Lincoln*

OLYMPIA STUDIO ORCHESTRA

GRADUATES—1929

Day Classes—Diploma Courses

GENERAL COTTON MANUFACTURING

James Harold Adams
Micizyslaw Peter Drozek
Edward Sivrin Farrow
Frank Pakula
Americo Peitavino
Clifton Slocum Pierce
Daniel Francis Sullivan, Jr.
Chao-Ming Yu

DESIGNING

Clifford Brookes
Samuel Lassow

LATCH NEEDLE UNDERWEAR KNITTING

Gregory Francis Meagher

CHEMISTRY, DYEING AND FINISHING

John Medeiros Ladino
James Pilkington
George Anthony Rawcliffe
Oswald Partington Turner

Adolphe John Twardowski

Day Classes—Special Courses

CERTIFICATES

THREE YEARS

Samuel F. Winsper, Jr.

TWO AND ONE-HALF YEARS

William Farr, Jr.
Roger E. Turgeon

TWO YEARS

John E. Foster
Henry F. Stasiun

ONE AND ONE-HALF YEARS

Victor J. Bjorngren
Henri Martel

ONE YEAR

Henry Czehowski

Theses Presented

Methods of Stripping Vat Colors — John M. Ladino
Combinations of Naphthol A S Colors with Other Fast Colors for the Production of Purples and Greens — James Pilkington
Naphthol A S Compounds as Developers for Azo Dyes — George A. Rawcliffe
Comparative Value of Certain Tests in Qualitative Analysis — Oswald P. Turner
A Comparison of the Dyeing Properties of Different Cuprammonium Rayons — Adolphe J. Twardowski

Evening Classes—Diploma Courses

Weaving and Designing

Ernest Carr
Paul Kovar

Chemistry and Dyeing

Thomas Townson

Evening Classes—Certificate Courses

Seven Years

John Crowther

Six Years

Joseph U. Darcy
John Edmundson
Ernesto Francisco
Frank Trojan

Five Years

Auguste J. Escolas
William H. Harrop
Henry Luckraft
Charlie Mello
Thomas Whittle

Four Years

Clifton M. Barton
Joshua Hoyle, Jr.
Stanislaw Kapinos
Walter S. MacPhail, Jr.
William J. McGurk
Honore Michaud, Jr.
Emile Pellerin
John C. Rogers
Frederick Rollinson
Gordon Smith
William Turner
Franklyn H. Weeks

Three Years

Francisco P. Almas
Omer H. Antaya
Robert Berwick
Wm. Bottomley, Jr.
Leo F. Carreau
Alfred Crowther
John P. Gonsalves
Gedeas Grenier
Raymond Hall
Edwin R. Hathaway
William T. Kaszynski
Oliva M. Labrie
Julian Laczenski
Henry Landreville
Conrad Levasseur
Hector Loader
Lucien H. Mitron
John Mulvey
Leon L. Ouimette
Joseph S. Peroni
Felix W. Plouffe
Joseph A. Plouffe
Joseph Prusinski
Ovila L. Therien
Robert H. Warner
John Whewell
James W. Whitehead
Samuel Woodruff

Two Years

Alfred Allard
Antonio Andrade
William Archer
Stanley Baczek
Earl R. W. Bates
Francis Baxendale
Robert Bland
Frank C. Bobrowiecki
Theresa Germaino
Stanley G. Hancock
Frederick J. Harrigan
Thomas E. Hawes
Alvin J. Hickok
Agnes Howard
Alphonse Jeannenot
Leo F. Jolin
Edward F. Riley
Earl Rogerson
August Rudler
Adelard Russie
George A. Selley, Jr.
Eugene Sequer
Mary Shelford
Stanley Shorrock

TWO YEARS *(Continued)*

John Bobrowiecki
Henry Buba
Stanley Carbonneau
William Carter
Herbert Cockshoot
Omer Cormier
Walter F. Cygan
Gaston J. Dalbec
Remi Dalbec
Omer J. Desjardines
John T. Doyle
Albert Dupre
Joseph Enos
Francis T. Fagan
Adam Fluegel
Raymond G. Furness
Edgar Gabeil
Robert W. Gardner
Andrew Korona
Joseph Lapointe
Tadeusz Lubera
John Marsh
George D. Martin
Bertha Medeiros
George E. Medeiros
Thomas Mellor
Stephen A. Mitzen
Joaquim Morey
Fred Nelson
Elie Ogier
William V. Oothout
William Ormerod
Jose L. Pereira
Lillianne H. Poulin
James Price
Speros Rentzis
Bert J. Silva
Mario Silva
Mary Smith
John H. Stewardson
James W. Stott
George Tattersall
Richard Taylor
Joseph L. Tremblay
George E. Vaughan
Edward Waddington
Albert Walker
Joseph Walmsley
Fred Watson
John J. Watts
Stanislaw Wojuszewski
Harold Wood
Norman Wrigley

ALPHABETICAL LIST OF GRADUATES

The following list has been corrected in accordance with information received previous to March 1st, 1930. Any information regarding incorrect or missing addresses is earnestly solicited.

D indicates a diploma; C indicates a certificate (covering a partial course only); S indicates special course.

Achorn, Robert E., Jr., I, '15 (D). Assistant Designer, S. Slater & Sons, Inc., Webster, Mass.

Adams, Elbert V., I, '22 (D). In Auto Tire Dept., Montgomery, Ward & Co., Chicago, Ill.

Adams, James H., I, '29 (D). Salesman, William B. Whidden & Co., 48 Chauncy St., Boston, Mass.

Adelsohn, Arthur A., III, '28 (D). With National Spun Silk Co., New Bedford, Mass.

Albakri, Mathew S., I, '25 (C). In Knitting Mill, 239 East 2nd St., Frederick, Md.

Allan, William W., I, '15 (D). Superintendent, Grosvenor Dale Co., North Grosvenor Dale, Conn.

Allen, Glawyer G., I, '25 (C). With Graniteville Mfg. Co., Graniteville, S. C.

Amarantes, Jerry O., VI, '19 (C). Clerk, Amarantes' Garage, New Bedford, Mass.

Ambler, Harry, III, '17 (D). With Cooper Kenworthy, Inc., Providence, R. I.

Amona, Cheng Q., I, '17 (D). Engineer, Bureau for the Improvement of Cotton Industry, Ex-Austrian Concession, Tientsin, China.

Anderson, Hilmer H., S, '22 (C). Superintendent, Brookdale Mills, Franklin, Mass.

Armitage, Stanley W., I, '25 (D). Ass't. Supt. Selma Cotton Mills, Selma, N. C.

Austin, Harold S., VI, '24 (C). Ass't. Routing Board Manager, Lewis Mfg. Co., Walpole, Mass.

Babcock, Howard L., VI, '21 (C). With Durr Packing Company, Utica, N. Y.

Baldwin, Fred L., S, '05 (C). With Sulloway Hosiery Mills, Franklin, N. H.

Balloch, Roger T., IV, '21 (D). Stylist, Sulloway Hosiery Mills, Franklin, N. H.

Barrett, Edward W., I, '21 (C). With Fairhaven Battery Co., Fairhaven, Mass.

Barrows, John T., III, '23 (C). Dentist, 96 Thompson St., New Bedford, Mass.

Barrows, Murray F., S, '05 (C). Ass't. Treasurer, Bristol County Mortgage Co., New Bedford, Mass.

Bates, Merton H., II, '20 (D). Painter, Osterville, Mass.

Bearcovitch, Alfred J., I, '15 (D). Second Hand in Dye House, Imperial Printing & Finishing Co., Bellefonte, R. I.

Beaumont, William, I, '25 (D). Ass't. Superintendent, Page Mill, New Bedford, Mass.

Bentley, Milton J., I, '11 (D). With Whitin Machine Works, Whitinsville, Mass.

Besse, Allen D., I, '22 (D). Assistant Designer, Wamsutta Mills, New Bedford, Mass.

Besse, Edward L., Jr., I, '22 (D). Overseer, Worcester Tire Fabric Co., Worcester, Mass.

Bessette, Leo A., I, '15 (D). Captain of Infantry, U. S. A. Army, Fort Meade, Md.

Bisbee, Robert T., I, '26 (C). Cashier, Carolina Industrial Bank, Biltmore, N. C.

Bister, Frederick J., I, '09 (D). With John Bister, Cotton Umbrella Cloth, 920 Broadway, New York City, N. Y.

Biswas, Khitish C., I, '28 (D). Assistant to Prof. Schwarz, Massachusetts Institute of Technology, Boston, Mass.

Bjorngren, Victor J., S, '29 (C). With Hathaway Machinery Co., New Bedford, Mass.

Blair, William G., Jr., I, '08 (D).

Blake, John J., I, '15 (D).

Blake, Wendell C., I, '25 (D). Testing Dept., Firestone Tire & Rubber Co., Fall River, Mass.

Blauvelt, John J., I, '22 (D). Assistant Superintendent, Belmont Silk Co., Kingston, Pa.

Blossom, Carlton S., I, '16 (D). With S. Slater & Sons, Inc., Webster, Mass.

Blossom, James W., I, '17 (D). With Blossom Bros., New Bedford, Mass.

Boardman, Ellen G., VII, '26 (C).

Boomer, Thomas M., Jr., I, '27 (D). With Firestone Tire & Rubber Co., New Bedford, Mass.

Booth, William, VI, '08 (D).

Borden, Eliot F., III, '28 (D). Assistant Chemist, Department of Health, State House, Boston, Mass.

Bottomley, Fred S., '23 (C). New Bedford, Mass.

Boutin, Leon A., IX, '28 (C). Machinist, South Middleboro, Mass.

Boyd, W. MacPherson, I, '22 (D). Superintendent, Canadian Cottons, Ltd., Hamilton, Ontario, Canada.

Braun, Leon A., I, '23 (D). Registered Druggist, Leominster, Mass.

Brend, Albert, II, '15 (C).

Brookes, Clifford, II, '29 (D). Designer, Page Mfg. Co., New Bedford, Mass.

Brooks, Ruby E., II, '22 (C). Mrs. Bradford A. Luce, 60 Glenwood Ave., Jersey City, N. J.

Brotherson, Curtis S., I, '28 (D). With Morse Twist Drill & Machine Co., New Bedford, Mass.

Brown, James P., VI, '11 (C). Secretary, Glencairn Manufacturing Co., Pawtucket, R. I.

Brown, Walter A., I, '17 (C). Overseer of Spinning, S. Slater & Sons, Inc., Webster, Mass.

Brownell, Ulysses G., Jr., I, '21 (D). Secretary to Agent, Wamsutta Mills, New Bedford, Mass.

Bruce, William, I, '27 (D). With Firestone Tire & Rubber Co., New Bedford, Mass.

Bruneau, V. Herbert, I, '23 (D). Superintendent, Canadian Cottons, Ltd., Canada Mill, Cornwall, Ontario, Canada.

Brunelle, Laurier O., I, '19 (D). In Office of City Treasurer, New Bedford, Mass.

Brunette, Romeo, VI, '23 (C). Tester, The Fisk Rubber Co., Ninigret Division, New Bedford, Mass.

Buckley, Charles E., II, '01 (D). Agent, Whitman Mills, New Bedford, Mass.

Burt, Raymond A., III, '14 (D). Dyer, Hampton Mfg. Co., Easthampton, Mass.

Burt, Stuart W., IV, '26 (C). Boss Dyer, Lehigh Silk Hosiery Mills, Philadelphia, Pa.

Cairns, James J., S, '19 (C). Designer, Hood Rubber Co., Watertown, Mass.

Campbell, Malcolm E., I, '22 (D). Cotton Specialist, U. S. Dept. of Agriculture, Clemson College, S. C.
Carlow, Charles L., II, '26 (D). Designer, Berkshire Cotton Mills, Adams, Mass.
Carlson, Sigfred A., III, '26 (D). Chief Chemist, Boston Elevated Railways, Dept. of Power, 538 Harrison Ave., Boston, Mass.
Carlson, Theodore E., I, '28 (D). With Clark Thread Company, Newark, N. J.
Carvalho, Joao B. deM., I, '20 (D). 207 7 de Setembre, Sala 1, Sobrado, Rio de Janerio, Brazil, S. A.
Cassidy, Elizabeth B., III, '22 (D). School Teacher, 69 Tremont St., New Bedford, Mass.
Cazenove, James O'H., I, '05 (D).
Chan, Annie C., IV, '23 (C). The Foot Ease Hosiery Mfg. Co., 2612 E. Yuhang Road, Shanghai, China.
Chang, Chih Y., I, '08 (D).
Chang, Fa-Kien, I, '23 (C). Shantung, China.
Chang, Mu W., S, '21 (C).
Chase, Alton W., II, '09 (D). Overseer of Carding, Gosnold Mills Co., New Bedford, Mass.
Chase, Raymond H., I, '10 (D). Superintendent, Potter Fine Spinners, Inc., Pawtucket, R. I.
Checkman, Frank E., I, '23 (D). West Wareham, Mass.
Chen, Ting F., I, '12 (D).
Chesebro, Robert E., IV, '24 (C). Hand Knit Hosiery Co., Sheboygan, Wis.
Chow, Frank L. H., S. '14 (C). Superintendent, Loo Fong Cotton Mills, Shantung, China.
Church, Morton LeB., S, '04 (C). Southern Representative of Catlin & Co., 1017 Commercial Bank Bldg., Charlotte, N. C.
Clancy, Martin F., I, '25 (D). Comber Man, Queen City Cotton Mill, Burlington, Vt.
Clark, Kenyon H., V, '11 (D).
Clarke, Edward W., I, '13 (D).
Coates, James E., Jr., I, '22 (D). Cost Department, Utica Steam & Mohawk Valley Cotton Mill, Utica, N. Y.
Cody, Edmond, I, '23 (C). Third Hand in Card Room, Wamsutta Mills, New Bedford, Mass.
Collins, Henry, I, '24 (D). With Collins Bros., Pawtucket, R. I.
Cook, Seabury, S, '25 (C). Aviation School, California.
Cookson, Albert, I, '23 (D). With Passaic Print Works, Passaic, N. J.
Cooper, John J. W., I, '05 (D). With E. P. Sheldon & Sons, 1008–1010 Hospital Trust Bldg., Providence, R. I.
Cornell, Harold C., I, '11 (D). Cotton Classer, Jenckes Spinning Co., Pawtucket, R. I.
Cornell, Maurice A., I, '21 (D). Master Mariner, South Dartmouth, Mass.
Cornish, Ruth C., II, '22 (C).
Corson, Sidney W., I, '05 (D). Overseer of Carding, Oneita Knitting Mills, Utica, N. Y.
Crawford, Fred E., II, '22 (D). With Borne, Scrymser Co., Elizabeth Port, N. J.
Crossley, Lawton, III, '16 (C). Chemist, Borne, Scrymser Co., Elizabeth Port, N. J.
Cumming, Robert W., Jr., II, '26 (C). Clerk, Hagden, Stane & Co., Newark, N. J.
Currie, Andrew, Jr., I, '02 (D). Vice-President, Erie Oil Co., Inc., Shreveport, La.
Curry, Walter F., III, '24 (D). With the Apponaug Co., Apponaug, R. I.
Czehowski, Henry, S, '29 (C). 112 County Street, New Bedford, Mass.
Dalrymple, George S., III, '22 (D). With National Spun Silk Co., New Bedford, Mass.
Darling, Elton R., III, '13 (D). Professor of Chemistry, James Milliken University, Decatur, Ill.
Davis, Albert H., I, '16 (C). Commission Merchant and Broker of cotton yarns and fabrics, 79 Verndale Ave., Providence, R. I.
Davis, Francis J., I, '26 (D). In garage in Fitchburg, Mass.

Davis, Russell O., VI, '27 (C). With S. Slater & Sons, Inc., Webster, Mass.

Deane, Robert J., III, '17 (D). Assistant Chief Chemist, American Printing Company, Fall River, Mass.

Delano, Lloyd S., I, '07 (D). Superintendent of Weaving, Warren Manufacturing Co., Warren, R. I.

Delay, John T., III, '17 (D). Chemist, Merrimac Chemical Company, North Woburn, Mass.

DeMartin, Richard S., VI, '06 (D). Overseer of Carding, Warren Manufacturing Co., Warren, R. I.

Deu, Yee B., I and IV, '08 (D).

DeVine, Richard, I, '26 (D). In testing laboratory, U. S. Testing Co., 1415 Park Avenue, Hoboken, N. J.

Devoll, Milton C., II, '09 (D). Cotton Salesman, 384 Acushnet Ave., New Bedford, Mass.

Dewey, Edward W., V, '11 (D). Superintendent and Buyer, Bennington Hosiery Company, Bennington, Vt.

Dick, Rudolph C., I, '13 (D). With Barnes Textile Service, 101 Milk St., Room 702, Boston, Mass.

Dixon, Fred M., Jr., S, '17 (C).

Doherty, Edward P., II, '04 (D). Doherty's Protective Agency, New Bedford, Mass.

Dolan, Edward F., S, '14 (C). Proprietor of Ohio Threading and Supply Co., Burkburnett, Texas.

Donaghy, Paul A., III, '22 (D). Salesman, Corn Products Refining Co., 47 Farnsworth St., Boston, Mass.

Drozek, M. Peter, I, '29 (D). With Devon Mill, New Bedford, Mass.

Duckworth, George H., S, '23 (C). Federal Prohibition Agent, Baltimore, Md.

Duflot, John, I, '24 (C). Ass't. Mgr., W. C. Jones, 19 Rue d'Avesnes, Lille, (Nord) France.

Duncan, Donald T., II, '21 (C). With H. R. Mallinson, 295 Fifth Avenue, New York City, N. Y.

Dunmore, Earl W., V, '11 (D). Superintendent, Utica Knitting Company, Mill No. 2, Utica, N. Y.

Dunn, Edward F., I, '24 (D). 951 South St., Roslindale, Mass.

Dupont, Emey, Jr., I, '25 (D). Silk Weaver, Sadonia Silk Mills, Mystic, Conn.

Edwards, Harold G., I, '19 (D). Treasurer, Bush & Company, New Bedford, Mass.

Espriella, Antonio J. de la, II, '15 (D). Manager Weaving and Designing Department, Espriella & Co., Cartagena, Colombia, S. A.

Espriella, Justo de la, S, '13 (C). Manager of Cotton Yarn Department, Espriella & Co., Cartagena, Colombia, S. A.

Espriella, Luis C. de la, I, '16 (C). With Espriella & Co., Cartagena, Colombia, S. A.

Ewing, James H., III, '23 (D). Assistant Chemist, Sales Laboratory, H. Kohnstamm Co., 87 Park Place, New York City, N. Y.

Fagan, Francis J., V, '12 (D). Foreman Underwear Department, Utica Knitting Company, Utica, N. Y.

Farr, William, Jr., S, '29 (C). With Morse Twist Drill & Machine Co., New Bedford, Mass.

Farrar, Hersey W., I, '17 (D). In Assembling Department, Morse Twist Drill & Machine Co., New Bedford, Mass.

Farrow, Edward S., I, '29 (D). Post Graduate Course, New Bedford Textile School, New Bedford, Mass.

Fawcett, John L., I, '28 (D). In Charge of all Sampling, Warwick Mills, West Warwick, R. I.

Fead, Charles L., IV, '27 (C). Manufacturer of Heavy Wool Hosiery, John L. Fead & Sons, Port Huron, Michigan.

Feen, Edward F., I, '21 (D). Erector, Whitin Machine Works, Whitinsville, Mass.

Fessenden, Charles E., II, '14 (D). Salesman, Warlick Manufacturing Co., 40 Worth St., New York City, N. Y.

Few, George P., VI, '17 (C). Superintendent Profile Cotton Mills, Jacksonville, Ala.

Finnell, Everett G., III, '24 (D). Chemist, National Spun Silk Co., New Bedford, Mass.

Fish, Myron C., VI, '02 (D). Secretary, American Supply Company, and Treasurer, Rhode Island Yarn Company, Providence, R. I.

Flaherty, Matthew W., III, '22 (D). Clerk, Post Office, New Bedford, Mass.

Forbes, Esley H., I, '02 (D).

Foster, Edward J., I, '24 (D). Designer, Oscar Hoffman Shirting Fabrics, 200 Church St., New York City, N. Y.

Foster, James E., S, '22 (C). Instructor, Junior High School, New Bedford, Mass.

Foster, John E., S, '29 (C). Student, University of Vermont.

Francis, George F., IV, '24 (C). Stationary Fireman, N. Y., N. H. & Hartford Railroad, New Bedford, Mass.

Freeman, Elmer L., V, '06 (D). President and Manager, Freeman Manufacturing Company, Detroit, Mich.

Freeman, Leo, III, '20 (C). Chemical Engineer, Room 42 Reymond Bldg., Baton Rouge, La.

French, Dean A., VI, '19 (C). Manager of Fabric Department, Miller Rubber Co., Akron, Ohio.

French, Morton T., IV, '12 (D). With Scott & Williams, Inc., 366 Broadway, New York City, N. Y.

Freschl, Max A., IV, '09 (D). Vice-President Holeproof Hosiery Company, Milwaukee, Wis.

Fuller, Everett H., III. '17 (D). Dyer, Hampton Company, Easthampton, Mass.

Gallagher, John V., IV, '08 (D).

Gammons, Molly Nye, II, '18 (C). Mrs. Warren Tobey, Barrington, R. I.

Gast, Paul R., III, '16 (C). Recipient Rockefeller Scholarship for Forestry study in Norway, Sweden and Germany.

Gay, Paul F., I, '10 (D). With Fro-joy Ice Cream Co., New Bedford, Mass.

Gifford, Thomas T., I, '01 (D). With Pierce Manufacturing Company, New Bedford, Mass.

Gillingham, Dana H., III, '10 (D). Cotton Merchant, 91 Union St., New Bedford, Mass., and New England Sales Manager, Delaware Rayon Co.

Gilmore, Daniel R., I, '22 (D). Tire Fabric Inspector, Firestone Tire & Rubber Co., Akron, Ohio.

Goff, Russell E., VI, '15 (C). Cotton Broker, Boston, Mass.

Goldberg, Bertram, IV, '13 (D). Treasurer, Bertram Goldberg, Inc., Silk Dyers, Johnstown, N. Y.

Goodwin, Albert W., II, '11 (D). Manager Fancy Goods Department, Reeves Brothers, Inc., 55 Leonard St., New York City, N. Y.

Gordon, Beirne, Jr., I, '04 (D). Manager, Skenandoa Rayon Company, Utica, N. Y.

Gosselin, Henry J., S, '25 (C). Machinist, The New Departure Co., Bristol, Conn.

Goulet, Henry J. O., I, '04 (D).

Goward, Niles W., I, '15 (D).

Grady, John H., III, '07 (D). Boss Dyer, Security Mills, Inc., Newton, Mass.

Gray, Ralph B., III, '27 (C). With Better Fabrics Testing Bureau, 225 West 34th St., New York City, N. Y.

Green, Charles H., S, '22 (C). Jersey Shore, Pa.

Greene, Dan E., S, '18 (C). Electrician, Woonsocket Rubber Company, Millville, Mass.

Grimshaw, Albert H., III, '16 (C). Associate Professor of Dyeing, North Carolina State College, Raleigh, N. C.

Haarla, Rauno A. V., I, '26 (D). Assistant Technical Director, Waasa, Puuvillatehdas, Finland.

Hadley, Wade H., VI, '00 (D). Secretary and Treasurer, Gregson & Dorsett, Siler City, N. C.

Hahn, Louis H., II, '18 (D). Proprietor, Novelty Fabric Co., 1244 Acushnet Ave., New Bedford, Mass.

Hale, Charles E., Jr., I, '22 (D). Costume and Scenery Designing, Ziegfeld Theatre, c/o "Show Boat" Co., New York City, N. Y.

Hall, Lincoln, S, '14 (C). Head Bookkeeper, City Mfg. Co., New Bedford, Mass.

Hall, Walton, Jr., VI, '06 (D). Judge of Probate, District of East Haddam, Moodus, Conn.

Hamer, Allan K., S, '15 (C). Boston, Mass.

Hamlen, Carleton LeB., III, '11 (D). With Hood Milk Co., Boston, Mass.

Hamlen, Walter G., Jr., III, '17 (D). Demonstrating Salesman, E. I. Dupont de Nemours & Co., 128 So. Front St., Philadelphia, Pa.

Hamrick, Lyman A., VI, '20 (C). Superintendent and General Manager, Musgrove Mills, Gaffney, S. C.

Hardy, Hudson E., I, '24 (D). Designer, Soule Mill, New Bedford, Mass.

Harney, Joseph J., I, '22 (D). In charge of Fabric Department, Firestone Tire & Rubber Co., London, England.

Harper, Powhatan F., VI, '23 (C). Foreman of Yard Force, Receiving and Shipping Clerk, Cotton Classer, Spray Cotton Mills, Spray, N. C.

Haskins, Ernest T., IX, '27 (C). Chauffeur, 57 St. Germain Street, Boston, Mass.

Hathaway, Ralph B., I, '26 (D). Assistant to Agent, Wauregan Mfg. Co., Wauregan, Conn.

Hathaway, Russell, I, III, '16 (D) (C). With Hathaway Laundry, New Bedford, Mass.

Hawes, Lester E., II, VI, '02 (D). Chauffeur, New Bedford, Mass.

Hayden, Paul A., I, '25 (D). Fabric Department, Firestone Tire & Rubber Co., Akron, Ohio.

Hayward, Caleb A., Jr., V, '11 (D). Salesman, C. A. Hayward & Son, Confectionery Agents, Brokers and Jobbers, New Bedford, Mass.

Hayward, Harold W., I, '16 (D). With D. E. H. Chemical Co., 277 Highland Ave., Somerville, Mass.

Heap, Harold, II, '23 (C). Designer, Berkshire Cotton Mfg. Co., Adams, Mass.

Heath, Roger A., III, '23 (D). Assistant Colorist, Passaic Print Works, Passaic, N. J.

Hinckley, Frank E., III, '12 (D). Chief Pharmacist's Mate, United States Navy, c/o Bureau of Navigation, Washington, D. C.

Hoffman, Frank A., VI, '24 (C). Designer, Gosnold Mills, New Bedford, Mass.

Holland, Warren E., II, VI, '11 (D). Treasurer, Darlington Warehouse Company, Darlington, R. I.

Hollas, James B., I, '25 (D). With S. Slater & Sons, Inc., Webster, Mass.

Holmes, Leander, I, '27 (C). Utility Man, Textile Developing Company, Boston, Mass.

Hood, John H., I, '25 (C). Assistant Treasurer, Bowling Green Spinning Mills, Blacksburg Spinning Mills, Globe Manufacturing Company, Clover, S. C.

Horton, Harold W., I, '19 (D). Selling Agent, Woonsocket Machine & Press Co., Inc., Woonsocket, R. I.

Horvik, Sigurd, IV, '22 (D). Superintendent, a/s Salhus Tricotage-fabrik, Salhus, near Bergen, Norway.

Houth, Joseph, Jr., III, '24 (D). Chemist, Pontiac Bleachery, Pontiac, R. I.

Howard, Arthur F., Jr., I, '25 (D). Efficiency Department, National Spun Silk Co., New Bedford, Mass.

Howell, H. Comer, VI, '23 (C). With Bibb Mfg. Co., Macon, Ga.

Howland, Ralph S., I, '13 (D). Purchasing Agent, Kendall Company, Walpole, Mass.

Hsaio, Chen H., VI, '22, I, '25 (C). Hunan First Cotton Mill, Changsha, Hunan, China.

Hsu, Yeisham, I, '25 (D).

Hung, Shao-Yu, III, '16 (C).

Hunt, Russell W., III, '21 (C). Dyer, Franklin Process Co., Philadelphia, Pa.

Hurley, James K., I, '24 (D). Designer, Hunter Mfg. Corp., New York City, N. Y.

Hutchinson, John J., I, '02 (D). Laundry Proprietor, Los Angeles, Cal.

Ing, David P. E., III, '24 (D). With Shantung Silk & Lace Co., Ltd., Chefoo, Shantung, North China.

Jackson, S. Eugene, VI, '07 (D). Assistant Treasurer, Crown Manufacturing Company, Pawtucket, R. I.

Jay, A. Sidney, S, '21 (C). Assistant to the Agent, The W. A. Handley Mfg. Co., Roanoke, Ala.

Jenks, Raymond M., I, '15 (D). Cost Clerk, West Boylston Manufacturing Company, Easthampton, Mass.

Jenks, Robert R., VI, '11 (C). President Fales & Jenks Machine Company, and Treasurer Woonsocket Machine & Press Company, Woonsocket, R. I.

Jennings, Everett C., III, '26 (D). With Franklin Process Co., Providence, R. I.

Jennings, Harold W., S, '21 (C). 55 Court Street, New Bedford, Mass.

Jewell, Robert H., III, '20 (C). Treasurer, Crystal Springs Bleachery Company, Chickamauga, Ga.

Johnson, Horace E., III, '16 (C). Chemist, Bell Telephone Laboratories, 463 West Street, New York City, N. Y.

Jones, Louis, S, '23 (C). 35 Elm Street, New Bedford, Mass.

Jourdain, Henry M., I, '18 (D). Letter Carrier, Post Office, New Bedford, Mass.

Joy, Walter, III, '25 (C). With Cambridge Rubber Co., Cambridge, Mass.

Judge, Edward E., I, '12 (D). Overseer, Gosnold Mills Company, New Bedford, Mass.

Kagan, Peter M., VI, '24 (C). With Walter Simpson, Inc., 42 South Water St., Providence, R. I.

Kallish, Frank, I, '11 (D). Designer, Utica Steam & Mohawk Valley Cotton Mill, Utica, N. Y.

Kanter, Harry, I, '23 (D). Designer, Toepher & Myers, 4 and 6 White St., New York City, N. Y.

Karl, William A., I, '19 (D). Purchasing Agent, Firestone Tire & Rubber Company, Akron, Ohio.

Kean, George P., II, '04 (D). Superintendent, Nyanza Mills, Woonsocket, R. I.

Keebler, Walter F., IV, '26 (C). With Circle-Bar Hosiery Co., Owen Sound, Ontario, Canada.

Kelty, Pharus T., I, '20 (C). Third Hand on Roving Frames, Page Mfg. Co., New Bedford, Mass.

Ketcham, Melville K., S, '21 (C). General Manager, Wellington Sears Co., 258 So. 18th St., Philadelphia, Pa.

Kinney, C. Stanley, I, '15 (D). Manager, Troy Laundry Company, 183 Exchange St., Pawtucket, R. I.

Kirschbaum, Erwin P., III, '26 (C). With New Bedford Gas & Edison Light Co., New Bedford, Mass.

Ko, Thomas S., S, '20 (C). Engineer, Textile Department, Anderson, Meyer & Co., Ltd., Shanghai, China.

Kolodny, Meyer Z., S, '21 (C). Machine Fixer, Allen & Co., Black Cat Hosiery Mills, Kenosha, Wis.

Kolodziey, Joseph, I, '24 (D). 149 Clara St., New Bedford, Mass.

Kravetz, Joseph, VI, '25 (C). With Fix-Rite Shoe Stores, H. Kravetz & Son, 343½ Cedar & 54 Mt. Vernon Sts., New Bedford, Mass.

Kwan, Sze Keen, I, '24 (D). Representative of the Diamond Knitting Mill, Ltd., Shanghai, China.

Kwok, Taai W., I, '26 (D). With Wing On Textile Mfg. Co., Nanking Road, Shanghai, China.

Labrode, Henry C., I, '11 (D). Foreman Finishing Room and Overseer of Warping Room, 90 Bayley St., Pawtucket, R. I.

Ladino, John M., III, '29 (D). Chemist, Diamond Alkali Co., Fairport Harbor, Ohio.

LaFleur, John B. B., IV, '04 (C). Superintendent, Suffolk Knitting Company, East Boston, Mass.

Lane, Daniel A., S, '23 (C). New Bedford, Mass.

Lassow, Samuel, II, '29 (D). Textile Designer, Amoskeag Manufacturing Co., Manchester, N. H.

Law, Kwok L., I, '24 (D). Hong Kong, China.

Lee, J. K. Theodore, VI, '23 (C). Textile Department, Northeastern University, Mukden, China.

Lee, Sik C., I, '25 (D). With Wing On Co., Ltd., Shanghai, China.

Lee, Tung H., VI, '24 (C). Vocational School, Wuhu, China, or 29 S Sing Shung Li. DelaTour, Shanghai, China.

Lee, William A., I, '07 (D). Clerk, Mills Manufacturing Company, Greenville, S. C.

Lenhart, Edmund, III, '16 (C). Proprietor, Lenhart's Pharmacy, New Bedford, Mass.

Levovsky, George A., III, '27 (D). New Bedford, Mass.

Levy, Henry M., S, '21 (C). With the Everwear Hosiery Company, Milwaukee, Wis.

Lewis, Don C. C., S, '17 (C). Automobile Salesman, Westport, Mass.

Lewis, Maurice A., III, '13 (D). With Doe & Ingalls, 198 Milk St., Boston, Mass.

Lewis, William C. T., I, '22 (D). Assistant Superintendent, Westport Manufacturing Co., Westport Factory, Mass.

Li Kung, I, '07 (D). Professor of the National Institute of Technology, Peking, China.

Liebmann, Robert E., Jr., II, '25 (C). With A. Steinman Co., Inc., 114 Bleecker St., New York City, N. Y.

Linderson, Carl A., I, '21 (D). Second Hand in Card Room, Devon Mills, New Bedford, Mass.

Lipson, Edward, S, '21 (C).

Livesey, Benjamin, Jr., III, '11 (D).

Livingstone, Joseph A., S, '14 (C). Clerk, Wamsutta Mills, New Bedford, Mass.

Lo, Ting Y., I, '07 (D). Dean and Professor of Textile Dept. of Technical College (Sect. I) of Peking University; Managing Director of Kai Yuen Woollen & Carpet Factory, Peking, China.

Lobley, Fay G., I, '24 (D). Assistant Designer, Hathaway Mill, New Bedford, Mass.

Lock, Robert F. K., I, '20 (D). Erecting Engineer, Wah Chang Trading Corp., (Sole Agents for Woonsocket Textile Machinery), P. O. Box 1178, Shanghai, China.

Lonergan, David J., II, '16 (C). With Federated Textiles, Inc., 30 Varick St., New York City, N. Y.

Loring, Andrew C., I, '26 (D). With Devon Mills, Inc., New Bedford, Mass.

Loud, Everett C., I, '27 (D). With Firestone Tire & Rubber Co., Akron, Ohio.

Lowther, John M., I, '24 (D). Overseer in Carding Department, Queen City Cotton Mills, Burlington, Vt.

Luce, Bradford A., I, '22 (D). In charge of Testing Department, Belding Heminway Company, Madison Ave. & 34th St., New York City, N. Y.

MacColl, William B., II, '05 (D). Secretary and Treasurer, Lorraine Manufacturing Co., Pawtucket, R. I.

Macia, William F., I, '28 (D). With United States Testing Company, 316 Hudson St., New York City, N. Y.

MacKenzie, John A., II, '07 (D). Wool Oil Salesman, American Oil Company, Providence, R. I.

Macomber, Augustus C., I, '11 (D). Real Estate Agent, 74 State St., New Bedford, Mass.

Macy, Andrew W., I, '07 (D). Superintendent, Nonquitt Mill, New Bedford, Mass.

Macy, Edwin H., I, '23 (D). President, Macy Manufacturing Co., 95 Court St., New Bedford, Mass.

Madero, Alberto, S, '02 (C).

Mainville, Alfred J., II, '22 (D). Third Hand, New Bedford Spinning Company, New Bedford, Mass.

Manning, Lewis G., V, '10 (D). Head of Knitting Department, New Bedford Textile School, New Bedford, Mass.

Marriott, Frederick A., I, '26 (D). With Thermord Rubber Co., Trenton, N. J.

Martel, Henri, S, '29 (C). Ave La Paz 699, Guadalajara, Mexico.

Martins, Antonio R., S, '20 (C). New Bedford, Mass.

Mason, Joseph E., II, '23 (C).

Matthews, Irving F., I, '25 (C). Salesman, 227 Union St., Room 510, New Bedford, Mass.

Maxfield, Linden H., I, '26 (D). With Lorraine Manufacturing Co., Pawtucket, R. I.

McCann, William M., III, '26 (D). With S. Slater & Sons, Inc., Webster, Mass.

McCraw, French Z., S, '26 (C). Foreman, Cloth Room, Vogue Mills, Gaffney, S. C.

McDevitt, Francis O., I, '22 (C). 78 Orchard St., New Bedford, Mass.

McDonald, Thomas J., III, '27 (D). With National Spun Silk Co., New Bedford, Mass.

McEvoy, Leo A., S, '22 (C). With Knitted Padding Co., 105 Chapman St., Canton, Mass.

McEvoy, Raymond R., I, '19 (C). Assistant Superintendent, The Knitted Padding Co., Canton, Mass.

McEwen, Ellsworth S., S, '18 (C). With Frear and Company, Bankers and Brokers, 43 Exchange Place, New York City, N. Y.

McGinn, Walter E., III, '17 (D). With Foxboro Instrument Co., Foxboro, Mass.

McIsaacs, Harold J., Proprietor, United Perfumery Co., Purchase St., New Bedford, Mass.

McKnight, John D., I, '22 (C). Converter, Nuess, Hesslein & Co., Inc., 53 White St., New York City, N. Y.

McNeely, Thomas J., II, '01 (C). Manager Lawrence Cotton Mill, Durham, S. C.

Meagher, Gregory F., V, '29 (D). 2 Norway Road, Milton, Mass.

Mercer, George C., Jr., III, '22 (C). With Millbank Bleachery, Lodi, N. J.

Miller, Wallace J., I, '22 (D). Cotton Classer, Crown Manufacturing Co., Pawtucket, R. I.

Mills, Clayton W., I, '26 (C). In Charge of Cotton Winding & Twisting, Rayon Winding, Twisting & Skeining, Newmarket Manufacturing Company, Newmarket, N. H.

Mills, Otis P., Jr., I, '05 (D). Automobile Distributor and Real Estate, Augusta St., Greenville, S. C.

Molins, Andres, II, '28 (C). Designer, 1 Calle Poniente No. 41, San Salvador, Central America.

Moore, Carroll C., I, '27 (D). With Potomska Mills, New Bedford, Mass.

Moore, Stephen R., II, '13 (D). Assistant Instructor in Weaving, New Bedford Textile School, New Bedford, Mass.

Moore, William H., S, '22 (C). Twister Section Hand, A. P. Smyre Mfg. Co., Gastonia, N. C.

Morris, Theodore P., VI, '19 (C). Superintendent, Ridge Mills, Inc., Gastonia, N. C.

Morrison, Julian K., VI, '20 (C). President, Brighton Mills, Passaic, N. J.

Morse, Alice L., II, '22 (C). Assistant Designer, Page Mill, New Bedford, Mass.

Morton, Walter E., VI, '23 (C). Cotton Classer and Overseer of Carding, Lafayette Cotton Mills, Inc., Lafayette, Ala.

Moss, Milo L., VI, '01 (D). New Bedford, Mass.

Mullarkey, Joseph F., Jr., I, '26 (D). Color Mixer, National Spun Silk Co., New Bedford, Mass.

Mung, Theodore C., S, VI, '22 (C).

Murphy, Edward L., Jr., IV, '26 (C). With Contoocook Mills Corp., Hillsboro, N. H.

Myers, Frederick H., III, '26 (D). With Windsor Print Works, No. Adams, Mass.

Nash, Howard P., Jr., III, '25 (C). Chicago, Ill.

Neel, Albert G., V, '09 (D). Superintendent, Earnshaw Knitting Co., Newton, Mass.

Nelme, Bennett D., II, '03 (D). Lumber and Farming, Wadesboro, North Carolina, Rt. No. 2.

Nelson, James A., II, '22 (C). With Wabasso Cotton Co., Trois Rivieres, Quebec, Canada.

Nichols, Henry W., II, '00 (D). Principal, Bradford Durfee Textile School, Fall River, Mass.

Norris, Thomas L., III, '28 (D). With New Bedford Rayon Co., New Bedford, Mass.
Northrop, William F., I, '16 (C). Salesman, Hopedale Manufacturing Company, Milford, Mass.
Novick, Joseph B., III, '25 (D). New Bedford, Mass.
O'Brien, John N., Jr., S, '21 (C). Automobile Painter, New Bedford, Mass.
O'Brien, Thomas B., VI, '11 (C). O'Brien Padawer, Inc., Cotton Waste and Linters, 202 W. 40th St., New York City, N. Y.
O'Brien, William L., S, '15 (C). Automobile Dealer, New Bedford, Mass.
O'Donnell, Thomas J., I, '26 (D). With Firestone Tire & Rubber Co., Akron, Ohio.
Ogden, William H., III, '18 (D). Chief Chemist, Jennings & Co., 93 Broad St., Boston, Mass.
O'Neil, John J., V, '06 (D). Optician, 389 Main St., Springfield, Mass.
Orr, Charles F., Jr., I, '25 (C). Jewelry Salesman, Wisconsin.
Osborn, John W., I, '02 (D).
Oscar, Jack P., S, '25 (C). 42 County St., New Bedford, Mass.
Paine, Howard N., S, '21 (C). Mason, 33 High School Road, Hyannis, Mass.
Pakula, Frank, I, '29 (D). With Amoskeag Manufacturing Co., Manchester, N. H.
Pallatroni, Paul J., I, '25 (D). With Kilburn Mill, New Bedford, Mass.
Palmer, Myrtland F., I, '13 (D). With Wellington, Sears & Co., 65 Worth St., New York City, N. Y.
Pan, Chen C., III, '16 (C).
Papademetrius, Demetrius, S, '21 (C). Textile Designer, Hathaway Mfg. Co., New Bedford, Mass.
Papageorge, George, IV, '23 (D). Weaver, New Bedford, Mass.
Papkin, Nathan, IV, '26 (D). Lodi, New Jersey.
Paradis, Joseph L., III, '25 (D). Industrial Engineer, Equitable Gas Co. of Pittsburgh, Pittsburgh, Pa.
Patt, Lester D., II, '08 (D). Claim Agent, United States Finishing Company, 40 Worth St., New York City, N. Y.
Pease, Bryden, S, '14 (C). With Hazlip, Hood Cotton Company, Greenville, Miss.
Peavey, Robert F., IX, '28 (C). New Bedford, Mass.
Peitavino, Americo, I, '29 (D). With Devon Mill, New Bedford, Mass.
Perez, Alfonso, S, '23 (C). Owner and Manager, St. Pedro Cotton Mill, Quito, Ecuador, S. A.
Perry, Allan M., I, '25 (D). Cloth Salesman, Renfrew Mfg. Co., Adams, Mass.
Peterson, Henry F., III, '22 (D). With Amoskeag Mfg. Co., Manchester, N. H.
Pickard, Walter D., I, '17 (D).
Pien, Ting K., I, '22 (C).
Pieraccini, Frank, Jr., II, '07 (D). Superintendent, Tire Fabric Corp., Salmon Falls, N. H.
Pierce, Clifton S., I, '29 (D). With Abraham & Straus, Inc., Brooklyn, N. Y.
Pilkington, James, III, '29 (D). With National Association Institute of Dyeing and Cleaning, Inc., Silver Springs, Md.
Pinault, Robert W., III, '24 (D). Textile Chemist, Research Staff, E. F. Houghton & Co., Philadelphia, Pa.
Pittle, Charles, IV, '09 (D). Importer, 1817 Acushnet Ave., (Chas. Pittle & Co.), New Bedford, Mass.
Potter, Benjamin R., II, '28 (D). Designer, Gosnold Mills, New Bedford, Mass.
Pressman, Jacob L., I, '24 (D).
Quinn, Francis J., IX, '27 (C). In Patents and Experimental Dept., Royal Typewriter Co., 316 Broadway, New York City, N. Y.
Radway, Charles A., III, '28 (D). 103 Commonwealth Ave., Chestnut Hill, Mass.
Ragan, Caldwell, VI, '19 (C). Secretary and Assistant Treasurer, Ragan Spinning Company, Gastonia, N. C.
Ramos, Edwin C., III, '25 (D). Student, New Bedford, Mass.
Ramsbottom, Archie, IV, '24 (D).

Section of Machine Shop

Rankin, William T., VI, '19 (C). Gastonia, N. C.
Rawcliffe, George A., III, '29 (D). Cost Man, Swansea Print Works, Swansea, Mass.
Reed, Francis P., III, '21 (D). Wareham, Mass.
Regan, Carlton E., III, '28 (C). New Bedford, Mass.
Remington, Allen K., I, '20 (D). With J. & P. Coats (R. I.) Inc., Pawtucket, R. I.
Richards, Benjamin, VI, '02 (D). Manager, Underwriters' Service Association, 175 West Jackson Blvd., Chicago, Ill.
Richardson, Malcolm H., I, '26 (D). With Firestone Tire & Rubber Company, Akron, Ohio.
Riding, Richard, S, '01 (C).
Rigby, Christopher E., Jr., I, '23 (C). With Dupont Rayon Co., Richmond, Va.
Rigby, James H., VI, '25 (D). Salesman, Dupont Rayon Co., Providence, R. I.
Riley, George V., III, '16 (C).
Rivero, Ricardo J., VI, '04 (D). Monterey, Mexico.
Robbins, Lloyd B., III, '20 (D). Onset, Mass.
Robenolt, Edward A., II, '11 (D). 23 Sycamore St., New Bedford, Mass.
Robinson, Arthur J., III, '17 (D). Steamship Pilot, N. B., M. V. & N. S. B. Co., New Bedford, Mass.
Robinson, Chester A., I, '22 (D). Teacher, Sagamore, Mass.
Robinson, Joseph L., S, '23 (C). Machinist, Continental Wood Screw Co., New Bedford, Mass.
Robinson, Raymond W., I, '26 (D). Attleboro, Mass.
Rodalewicz, Henry F., IX, '28 (C). Die Maker, John I. Paulding, Inc., New Bedford, Mass.
Ronne, Arthur H., I, '17 (D). Styling and Designing on Shirtings, McCampbell & Co., 320 Broadway, New York City, N. Y.
Rooney, Harold E., I, '26 (D). Foreman, Berkshire Manufacturing Company, Depot St., Adams, Mass.
Ross, Edwin J., I, '23 (D). Head of Silk Testing Laboratory, Kahn and Feldman, Inc., 40 E. 29th St., New York City, N. Y.
Rowan, Peyton, VI, '20 (C). Cotton Buyer, J. G. Boswell, 524 Roberts Building, Los Angeles, Cal.
Royster, David W., IV, '16 (C). Manager Royster Oil Co., Inc., Shelby, N. C.
Rubin, Juan D., I, '24 (D). Textile Engineer, Parks-Cramer Co., Fitchburg, Mass. (Territory for Supervision Mexico and South America).
Rubinstein, Isaac, III, '27 (D). 34 West 89th St., New York City, N. Y.
Ruggles, John W., I, '20 (D). Owner and Manager of Yarn Dept., N. E. Nickerson & Co., New Bedford, Mass.
Salter, Milton B., III, '19 (C).
Salvati, Salvato, I, '20 (D). With Milan Silk Co., New Bedford, Mass.
Sayers, William J., I, '23 (D), III, '25 (D). With Apponaug Co., Apponaug, R. I.
Scharf, Elmer, III, '22 (D). Chemist and Dyer, Holeproof Hosiery Company, Milwaukee, Wisconsin.
Scheid, Alfred, VI, '11 (C). Bond Salesman, Clarence Hodson & Co., New York City, N. Y. (Clinton, Mass.)
Schiller, Wesley L., I, '23 (D). Assistant to Superintendent, Lebanon Mill Co., Pawtucket, R. I.
Schofield, George L., III, '28 (D). Student, North Carolina State College, Raleigh, N. C.
Scholze, Ernest A., II, '12 (D). With Lorraine Mfg. Co., Pawtucket, R. I.
Schoop, Hans, S, '22 (C). 35 Hadlandstrasse, Zurich 6, Switzerland.
Schulman, Otto, II, '26 (C). 12 Lantinen Puisto Katu, Tammerfors, Finland.
Searell, George W., III, '22 (D). With Kahn and Feldman, Inc., 360 Suydam St., Brooklyn, N. Y.
Searls, Albion K., I, '27 (C). 7 B St., Adams, Mass.
Service, Louis B., S, '20 (C). Plant Manager, The Gardiner Hall Jr. Co., South Willington, Conn.
Shanks, James, Jr., III, '19 (D). With Joseph Morningstar & Co., Inc., 650 West 34th St., New York City, N. Y.
Shill, Alexander, I, '15 (D).

Silva, Americo O., I, '24 (D). Chicago, Ill.
Simmons, Charles G., S, '22 (C). Consulting Engineer, Serguson and Company, 200 Fifth Ave., New York City, N. Y.
Singer, Meyer K., I, '21 (D). With John Campbell Co., Newark, N. J.
Siu, Poy N., I, '23 (C). 5 Lower Castle Road, Hong Kong, China.
Smith, Carlton W., III, '11 (D). Clerk, Drift Road, South Westport, Mass.
Smith, James C., VI, '23 (C).
Snedden, George A., VI, '20 (C). Cotton Salesman, William Almy & Co., New Bedford, Mass.
Snell, Elliott A., I, '27 (C). In testing laboratory, U. S. Testing Co., 316 Hudson St., New York City, N. Y.
Snyder, Arthur E., V, '09 (D). President Berkshire Moccasin Co., Holliston, Mass., and Worsted Yarn Salesman, Percy A. Legge, 185 Summer St., Boston, Mass.
Soler, Julius A., I, '28 (D). Sub-Director of Carding and Spinning, Fabrica de Rio Blanco, Rio Blanco, Ver, Republica Mexicana.
Sotnick, George, IV, '22 (D). Machinery Fixer, Pawtucket Hosiery Company, Pawtucket, R. I.
Spare, Arthur F., I, '09 (D). With J. V. Spare & Co., New Bedford, Mass.
Spencer, William A., VI, '04 (D). Superintendent, Trainer Mills of Martel Mills, Inc., Chester, Pa.
Stasiun, Henry F., S, '29 (C). New Bedford, Mass.
Stubbs, Guy P., '01 (C). Manager of an estate, Monroe, La.
Sturtevant, Harold B., III, '15 (D). Assistant Superintendent, Bellman Brook Bleachery Co., Fairview, N. J.
Sullivan, Charles J., III, '28 (D). With Pacific Mills, Lawrence, Mass.
Sullivan, Daniel F., Jr., I, '29 (D). New Bedford, Mass.
Sun, Chiating, I, '25 (D). 14 Hsia Chia Square, Sianfu, Shensi, China.
Sweeney, Eugene F., I, '22 (D). Head of Quality and Production in Fall River and New Bedford, Firestone Tire & Rubber Co., Mass.
Swenson, Hilary S., III, '19 (C). Chemist, Morse Twist Drill & Machine Co., New Bedford, Mass.
Sylvester, Burton C., III, '18 (D). Division Superintendent, U. S. Finishing Co., Pawtucket, R. I.
Taylor, Charles K., VI, '04 (D). Textile Manufacturing, Magnolia, Miss.
Taylor, Fred, I, '04 (D). Superintendent, Firestone Cotton Mills, Fall River, Mass.
Terry, Clifford B., VI, '04 (D). Salesman, Foster Machine Co., Westfield, Mass.
Thayer, Edward A., S, '14 (C). Processing Rayon, Pawtucket, R. I.
Thayer, Ellis H., V, '07 (D).
Thornley, Clifton L., I, '22 (D). Shoe Retailer, Walk-Over Shoe Store, 342 Westminster St., Providence, R. I.
Tom, George K. Y., I, '25 (D).
Tourtellot, Pierce D., VI, '13 (C). With Nashawena Mill B, New Bedford, Mass.
Tripp, Clifford H., I, '05 (D). Inspector of Textiles, Q. M. C., Boston General Intermediate Depot, Boston, Mass.
Tripp, Francis, III, '28 (D). Student, North Carolina State College, Raleigh, N. C.
Tripp, Fred R., III, '28 (D). Student, North Carolina State College, Raleigh, N. C.
Tripp, Kenneth S., IX, '28 (C). With National Spun Silk Co., New Bedford, Mass.
Trott, George R., I, '24 (C). Clerk, J. & P. Coats (R. I.) Inc., Pawtucket, R. I.
Truesdale, William P., III, '24 (D). U. S. Finishing Co., Providence, R. I., Silver Springs Branch.
Tsang, Yiu S., I, '07 (D).
Tsao, Walter Chih C., I, '25 (D).
Tsu, Chee L., I, '08 (D).
Tu, Chung T., I, '22 (D).
Turgeon, Roger E., S, '29 (C). With New Bedford Rayon Co., New Bedford, Mass.

Turnbull, Walter, I, '03 (D). General Agent, Life Insurance Company of Virginia, Lawrenceville, Va.

Turner, Gordon R., I, '28 (D). In testing laboratory, United States Testing Co., 316 Hudson St., New York City, N. Y.

Turner, James H., 3rd, III, '22 (D). Chemist, Chemical Co. of America, 46 Murray St., New York City, N. Y.

Turner, Oswald P., III, '29 (D). With Willimantic Thread Co., Willimantic, Conn.

Twardowski, Adolphe J., III, '29 (D). With Amoskeag Manufacturing Company, Manchester, N. H.

Urquhart, George C., III, '09 (D). Shanghai, China, representative of a Boston dye Manufacturing Company.

Van Dyk, Francis R., II, '21 (C). Vice-President, James Van Dyk Company, 50 Barclay St., New York City, N. Y.

Vera, Frederick J., I, '07 (D).

Vieira, Nicholas R., III, '18 (D). With Newport Chemical Works, Passaic, N. J.

Visbal, Luis C., IV, '12 (D). Manager Knitting Department, Espriella & Co., Cartagena, Colombia, S. A.

Waldstein, Benjamin, I, '15 (D). Salesman, S. H. Waldstein, 10 High St., Boston, Mass.

Walker, Stuart B., I, '26 (D). Textile Testing and Analyzing, U. S. Testing Co., 316 Hudson St., New York City, N. Y.

Wallner, Siegfried, IV, '19 (C). Wallner-Haynes Realty Co., Miami, Fla.

Wallner, Waldemar, IV, '23 (C). Superintendent, Paul Knitting Mills, Inc., Radford, Va.

Walne, James A., I, '26 (D). Designer, Taylor Clapp & Beall, 109 Worth St., New York City, N. Y.

Walters, Harold J., IV, '07 (D). Assistant Superintendent, Thomas Develon, Jr., A Street and Indiana Ave., Philadelphia, Pa.

Wareing, Eli W. T., III, '27 (D). With United Merchants and Manufacturers, Fall River, Mass.

Waring, Edmund A., III, '28 (D). With National Spun Silk Co., New Bedford, Mass.

Waring, Joseph A., Jr., III, '25 (D). With Dupont Rayon Co., Buffalo, N. Y.

Waring, Leo J., III, '25 (D). With S. Slater & Sons, Inc., Webster, Mass.

Watson, James, Jr., III, '22 (D). Marion, Mass.

Watkins, Charles F., Jr., III, '21 (D). Superintendent of Silks, Apponaug Co., Apponaug, R. I.

Waxler, Jacob H., I, '21 (D). Insurance and Real Estate, New Bedford, Mass.

Weller, George W., Jr., S, '18 (C). Comberman, Ponemah Mills, Taftville, Conn.

Wentworth, Howland, VI, '15 (C). New Bedford, Mass.

Wheeler, William J., S, '22 (C). Salesman, Tide Water Oil Sales Corp., East Providence, R. I.

White, Clifford L., II, '09 (D). Cotton Classer, Fisk Rubber Co., Ninigret Division, Pawtucket, R. I.

White, Elliott H., III, '26 (D). With City Dye Works, Springfield, Mass.

Whitehead, George E., I, '23 (D). New Bedford, Mass.

Whitlow, Samuel A., Jr., III, '22 (D). Electrical Engineering, New York Edison Company, 130 East 15th St., New York City, N. Y.

Whitman, L. Clay, II, '22 (D). Washington, R. I.

Whitney, Howard B., I, '16 (D). George L. Whitney Market, Pawtucket, R. I.

Wilcox, Roger M. H., S, '10 (C). Special Agent, Union Mutual Life Insurance Company, 30 State St., Boston, Mass.

Willey, Eugene L., I, '24 (D). In Spinning Department, Harmony Mills, Cohoes, N. Y.

Williamson, Thomas G., VI, '00 (D). With Frigidaire Corp., 280 Union St., New Bedford, Mass.

Winnell, Lloyd H., III, '20 (D). With National Aniline & Chemical Company, 40 Rector St., New York City, N. Y.

Winsper, Samuel F., Jr., S, '29 (C). With Soule Mill, New Bedford, Mass.

Witherbee, Rex G., I, '05 (D). Plant Engineer, Utica Steam & Mohawk Valley Cotton Mills, Utica, N. Y.

Wong, Fook W., I, '18 (D). Director of the Bureau of Mining Affairs of Wai-Chow, Wai-Chow-Fu, Kwongtung, 7 Man Tak Road West, Canton City, Canton, China.

Wong, James H. Y., I, '25 (D). Sales Manager and Superintendent, A. B. C. Underwear Mill, Office at 193A Nanking Road, Factory at 231 Connaught Road, Shanghai, China.

Wong, Ka L., I, '07 (D). Instructor, Peking Technical College, Peking, China.

Wong, Thomas G., I, '15 (D). General Manager, China A. B. C. Underwear Mill and Superintendent, Tung Yih Cotton Mill, Shanghai, China.

Wood, Theodore, I, '03 (D). Wood, Vanderpyle Co., Inc., 52 Vanderbilt Avenue, New York City, N. Y.

Woodward, Chester M., I, '24 (D). Designer, Harmony Mills, Cohoes, N. Y.

Worden, George, II, '07 (D). Overseer of Weaving, Flint Mills, Fall River, Mass.

Ybarra, Andrew C., VI, '04 (D).

Yen, Yuan S., I, '20 (D). c/o Dah Sun Cotton Mill, Nantung Chow, Kiangsu, China.

Young, Frederick J., VI, '04 (D). Manager, Bemis Cotton Mill, Bemis, Tenn.

Young, James D., I, '26 (D).

Young, Jun L., I, '25 (D). 233 N. Kuakini St., Honolulu, Hawaii.

Young, Thomas, II, '21 (C). Designer, Potomska Mills, New Bedford, Mass.

Young, Tsun S., I, '17 (D). Engineer, Dah Foong Cotton Spinning and Weaving Mill, Shanghai, China.

Young, Yolay, I, '21 (C). Shanghai, China.

Yu, Chao-Ming, I, '29 (D). Post Graduate Course, New Bedford Textile School, New Bedford, Mass.

Yu, Victor H., I, '20 (D). Director of the Dah Lung Cotton Mills, Changchow, China, and with the Wei Kee & Co., 455 Tientsin Road, Shanghai, China.

Yuan, Harold H. H., I, '23 (C). General Manager, Hua Kuang Trading Corp., 173A Tunbridge Road, Tientsin, China.

Zung, King K., III, '20 (C).

EVENING DIPLOMA GRADUATES

Acomb, William, II, '07. Head of Weaving Department, New Bedford Textile School, New Bedford, Mass.

Baldwin, John M., III, '14. 48 Shawmut Avenue, New Bedford, Mass.

Bavoux, Roger E., II, '27. Changer, New Bedford Spinning Co., New Bedford, Mass.

Bolton, James, VI, '17. Superintendent, Gosnold Mills Co., New Bedford, Mass.

Bolton, Wright, Jr., III, '14. Superintendent, Androscoggin Mills, Lewiston, Maine.

Bowen, Evan A., VI, '21. Holmes Manufacturing Co., New Bedford, Mass.

Burton, James L., II, '22. With Nashawena Mills, New Bedford, Mass.

Carr, Ernest, II, '29. Designer, Whitman Mill No. 2, New Bedford, Mass.

Carse, Henry G., VI, '21. Overseer of Silk Department, Gosnold Mills Co., New Bedford, Mass.

Day, Andrew F., VI, '19. Insurance Agent, 96 William St., New Bedford, Mass.

Driesen, Frank, VI, '26. Second Hand, Nashawena Mills, New Bedford, Mass.

Dumas, Leon F., II, '24. Second Hand, Soule Mills, New Bedford, Mass.

Flanders, Kenneth A., VI, '20.

Green, Jim, II, '06. Farmer, R. F. D. No. 4, Box 75, So. Dartmouth, Mass.

Gurney, Preston S., VI, '19. Overseer of Carding, Hoosac Cotton Corp., North Adams, Mass.

Hagen, John F., VI & II, '16. Manager, Executive Offices, Cotton Mill Division, Standard Textile Products Company, 320 Broadway, New York City, N. Y.

Hammond, Amos E., I, '04.

Holden, Frank, VI, '18. Head of Carding and Spinning Department, New Bedford Textile School, New Bedford, Mass.

Knitting Department, showing Underwear and Finishing Machines

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I hereby make application for admission to the day classes of the New Bedford Textile School.

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Name in full .....

Age last birthday .....

Home residence .....

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Name of school last graduated from .....

If not a graduate, school last attended.....

State in what way you first learned of the school.....

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Mark X Against Course Desired

General Cotton Manufacturing Course
Designing Course
Chemistry and Dyeing Course
Carding and Spinning Course
Circular Hosiery Knitting Course
Latch Needle Underwear Knitting Course
Special Course in

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